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HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 26 March 1980**INFANTRY, AIRBORNE, AND AIR ASSAULT
DIVISION OPERATIONS**

PREFACE

The **division** is the largest U.S. Army organization that trains and fights as a team. A division is organized with varying numbers and types of combat, combat support, and combat service support units. *

Five types of divisions exist in the force structure: **armored, mechanized, infantry, airborne, and air assault**. The division is a self-sustaining force capable of independent operations, even for long periods of time. A division usually fights as part of a larger force, most often a corps. Divisions, however, are the backbone of the Army, and the land battle is won or lost by their battalions.

This manual is organized in two parts. **Part One** describes how the infantry division is organized and employed. It also discusses those aspects of division combat which are generally common to infantry, airborne, and air assault division operations. **Part Two** is devoted to the organization and employment of the airborne and air assault divisions and the aspects of combat operations which apply specifically to these divisions. Because the maneuver battalions of the infantry, airborne, and air assault divisions normally fight as part of a brigade, the way brigades fight is described in sufficient detail to understand division operations. A detailed description of how infantry brigades fight is contained in **FM 7-30, Infantry, Airborne, and Air Assault Brigade Operations**.

FM 71-100, Armored and Mechanized Division Operations, describes how armored and mechanized divisions fight.

*This publication, together with FM 71-100, 29 September 1978, supersedes FM 61-100, 15 November 1968.

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Throughout this manual the word "he" is intended to include both the masculine and feminine genders.

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INFANTRY, AIRBORNE, AND AIR ASSAULT DIVISION OPERATIONS

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ORGANIZATION AND EMPLOYMENT OF THE INFANTRY DIVISION

Part One

CHAPTER 1

The Division

The mission of the United States Army is to win the land battle. To do this, the Army is organized into divisions. These divisions fight the land battle.

GENERAL

Before World War I, the regiment was the Army's largest tactical and administrative command.

During World War I, infantry divisions were formed by combining regiments into two brigades subordinate to the division. Each brigade had two regiments and was supported by field artillery and service units.

During World War II, armored, cavalry, airborne, and motorized divisions were formed in addition to infantry divisions. Divisions were streamlined by eliminating the brigade headquarters. This meant that the division commander directly commanded three infantry regiments. These were supported by four field artillery battalions, engineer battalions, and service units. Regiments were still responsible for their logistical and administrative support. In armored divisions, regiments were later replaced by three combat commands which were similar to brigades. Each combat command had assigned tank and armored infantry battalions. Combat commands were control headquarters only—they controlled tactical operations. The logistics and administration chains extended directly from division to battalion.

The Korean War was fought by infantry divisions organized generally as they had been in World War II.

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In the late 1950's, the Army prepared for tactical nuclear war by reorganizing its divisions into five battle groups in each infantry division. These battle groups were, in effect, large battalions, each with five rifle companies, a combat support company, and appropriate field artillery and service support. Battle groups were self-sustaining and could be employed singly or in combinations.

In the early 1960's, the "pentomic" division, a battle group organization, was abandoned. At this time, the combat command concept traditional to armored division organization was adopted for all divisions. Combat commands were called brigades. Each division had three brigades into which various numbers of battalions could be grouped. All divisions were similarly organized except that some were light (infantry and airborne) and some were heavy (armored and mechanized), depending on the types of battalions assigned. A new division, the airmobile division, now called an air assault division, was organized. Differences between divisions were in types of battalions assigned and in the composition of the

division base. The war in Vietnam was fought primarily with air assault, infantry, and airborne divisions and separate brigades.

Since the Vietnam War, infantry, airborne, and air assault divisions have been provided additional antitank weapons—antitank guided missiles (ATGMs).

Today US infantry, airborne, and air assault divisions have five times the capability, in terms of firepower and mobility, of infantry divisions of the early 1950's. New equipment to be introduced over the next five to seven years will again dramatically increase divisional capabilities.

Long-range trends for US Army infantry, airborne, and air assault divisions and for similar divisions in armies of major foreign powers are generally toward better survivability and more lethal firepower, especially antiarmor firepower. For a discussion of trends in combat capability, see chapter 2 of FM 100-5, *Operations*.

ORGANIZATION OF THE INFANTRY DIVISION

Infantry divisions are organized with varying numbers and types of maneuver battalions; however, the basic organizations are alike and each has:

- A division headquarters and headquarters company and three brigade headquarters and headquarters companies which provide command control for units assigned or attached to the division. The division normally controls its three organic

brigades; however, additional brigades (up to 5) may be assigned based on operational requirements.

- Infantry, mechanized, and tank battalions to destroy the enemy and to seize and hold terrain.

- An air cavalry squadron for reconnaissance, security, and economy of force operations.

- A division artillery consisting of three light artillery battalions and a mixed medium/heavy artillery battalion to provide indirect fire support, a target-acquisition battery to assist in target acquisition, and a headquarters and headquarters battery for command control.

- An air defense artillery battalion to help protect the division from air attack.

- An engineer battalion for combat engineer support.

- A signal battalion to provide communications between divisional command control installations such as division CPs (tactical, main, and rear), brigades, division artillery, and support command.

- A combat electronic warfare intelligence battalion which collects, processes, and disseminates intelligence.

- A nuclear, biological, and chemical defense company to provide for decontamination and to reconnoiter areas believed to be contaminated.

- A military police company to provide traffic control, security of enemy prisoners of war, and assistance in area security in the division rear.

- A combat aviation battalion to provide command and control aircraft to the division, attack helicopter support, and air transport with a single lift capability of two rifle companies.

- A division support command to provide combat service support to all assigned units of the division.

Since the number and types of maneuver battalions organic to infantry divisions vary, the discussions in this manual address the employment of a division comprised of eight infantry battalions, one mechanized battalion, and one tank battalion.

To increase its combat power, field and air defense artillery, attack helicopter, and engineer units may be attached to or placed in support of the division.

CONCEPT OF EMPLOYMENT

The infantry division is a combined arms force of maneuver, combat support, and combat service support units. As the division meets and destroys enemy forces, it operates in accordance with the principles and concepts set forth in FM 100-5, **Operations**.

The infantry division does not have the mechanized assets to close with the enemy's heavy forces in terrain suitable for mechanized operations; rather, it is more effectively employed in terrain favoring

dismounted operations, such as large urban areas, mountains, and jungles. Unique characteristics of the infantry division are:

- The infantry division is soldier-centered as opposed to equipment-centered.

- When engaged in combat, the infantry division is predominantly footmobile.

The organization and equipment of the infantry division create a combat unit with specific strengths and vulnerabilities.

Strengths

**THE INFANTRYMAN,
AND THE DIVISION
BUILT AROUND THE INFANTRYMAN,
CAN FIGHT EFFECTIVELY
IN ANY CLIMATE
THAT MAN CAN ENDURE.**

- The infantry division operates in virtually all terrain and weather conditions and enemy situations. The division's combat power is only slightly degraded by extremes of weather or terrain, thus causing it to be a formidable opponent where armored and mechanized divisions cannot exercise their full battlefield mobility and firepower. Forests, mountains, swamps, and urban areas are examples of terrain that favors employment of the infantry division. Footmobile infantry forces carry the fight to the enemy over mountainous or broken terrain and through densely forested and built-up areas.

- The infantry division requires less logistical support than equivalent mechanized/armored units. The infantry division's characteristically light equipment and less complex weapon systems require correspondingly less maintenance support and less favorable conditions in which to operate.

- Infantry enters a battle using varied modes of strategic or tactical transport. The limited amount of organic heavy equipment allows the infantry division to be more easily transported by land, air (airland, airmobile, and airborne operations), and naval vessel (amphibious operations). Available transport can be devoted to moving combat troops without necessitating the movement of large amounts of heavy equipment and maintenance installations. Once employed, the infantry division is relatively easy to resupply and sustain, and it can be readily repositioned for subsequent employment in critical areas.

- Divisional artillery is light, easily set up and employed, less complex, and matches the mobility and fighting characteristics of the supported infantry. Although some limitations in tracked mobility, throw weight, and sophisticated weaponry are apparent when compared with mechanized or armored divisions, the infantry division realizes a commensurate gain in agility and responsiveness.

Vulnerabilities

- Eight of ten maneuver battalions of the infantry division are footmobile. The vehicles of the supply and transport (S&T) battalion are used to move supplies; when used for troop movement, they are not available for supply transport.

Airmobility assets are similarly limited. The combat support aviation companies of the combat aviation battalion can provide airlift for only two rifle companies in a single lift. The attack helicopter company and the air cavalry squadron provide transport exclusively for organic elements.

The footmobility of the division increases reaction time, thereby limiting battlefield maneuverability. Enemy mechanized forces may be able to apply decisive combat power before the infantry division can concentrate to alter unfavorable combat ratios. When required to operate alongside the more mobile armored or mechanized divisions, care must be taken to insure that the more mobile divisions do not unnecessarily expose the infantry division's flank. This is especially critical during the conduct of the defense.

Since the infantry division's battlefield maneuverability is limited, timely and accurate intelligence of the enemy's capabilities and intentions becomes critical to the division's disposition for combat. The mobility differential between footmobile infantry and opposing motorized or mechanized forces requires the infantry commander to exercise extreme caution in his efforts to concentrate forces on the battlefield. He must deploy his division on terrain that will lessen the mobility differential. Most infantry concentrations of maneuver combat power will occur prior to the start of the battle, although foot moves in rugged terrain are possible during conditions of reduced visibility after the battle begins.

- While moving, infantry combat troops are especially vulnerable to enemy fires. The tank battalion and the mechanized battalion are the only units with vehicles which provide protection from the effects of NBC, artillery, and direct fire.

Vulnerability can be greatly reduced by skillful use of terrain and by construction of field fortifications. Although infantry must be prepared to fight on foot from expedient shelters found on the battlefield, deliberate defensive positions should be constructed whenever possible to provide adequate protection against enemy fires. The proper application of countersurveillance measures, to include camouflage, reduces the vulnerability of infantry units by deceiving, defeating, or degrading the enemy's target-acquisition systems.

In certain offensive or defensive operations, infantry may be forced to abandon its protection to move in the presence of the enemy. The maneuver of unprotected footmobile forces may subject the force to the effects of heavy fires or NBC agents.

- The infantry division has less organic firepower—both direct and indirect—than armored and mechanized divisions. It has three light artillery direct support battalions and one medium/heavy artillery battalion. The armored and mechanized divisions have three medium artillery direct support battalions and a heavy battalion. By comparison, the infantry division artillery has less throw weight in a single volley, range, and bursting radius than the heavy divisions. The numbers of direct fire weapon systems of the armored and mechanized divisions exceed those of the infantry divisions. The armored and mechanized divisions have six and four times, respectively, the number of tank systems.



CHAPTER 2

Threat

For the most part, potential enemies of the United States are organized, equipped, trained, and tactically schooled in either Soviet or Chinese military concepts.

INTRODUCTION

Fundamental to the tactical concepts of both the Soviet and Chinese armies are several cardinal ideas. These are:

MASS—Victory is most easily and, in the end, economically achieved by overwhelming the enemy with numbers.

MOMENTUM—Numbers combined with speed destroy an enemy quickly; and although losses may be high at the outset, quick collapse of the enemy makes the mass-speed combination more economical in the long run.

CONTINUOUS COMBAT—By applying mass continuously—day or night, and in bad weather with limited visibility—one achieves and sustains momentum, thus overwhelming enemy forces and destroying their ability to defend as well as their will to do so.

OFFENSE—Threat forces defend primarily to permit an attack somewhere else, to regroup forces, or as an interlude between offensive operations. As a general rule, however, it is necessary to take combat initiative to achieve decisive results.

In world areas of most concern to the United States, Threat forces are primarily armored. They feature a comprehensive combined arms team of tanks; armored infantry fighting vehicles; antitank guided missiles (ATGMs); self-propelled field and air defense artillery; tactical fighter bomber aircraft and armed helicopters; self-propelled, rapid-launch tactical bridging; and supporting mobile equipment.

Threat forces train extensively for operations on a battlefield where nuclear, biological, and chemical (NBC) weapons are used. They carry a complete array of individual and vehicular NBC protective gear. Most Threat armored vehicles provide pressurized protection for crews.

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The Threat electronic warfare capability is substantial and impressive. It includes radio intercept, direction finding, jamming, and deception. Threat forces use electronic warfare together with fire support to deny the enemy use of his electronic systems and to protect Threat electronic systems. These operations are called radio-electronic combat.

Consequently, the battlefield will be dense with high-quality complementary weapons of all types, and there will be an intense fight in which large numbers on both sides are likely to be destroyed very quickly. The air over the battlefield will be

dense with air defense and artillery fires, meaning successful employment of fighter bombers and attack helicopters will be highly dependent on successful counterfire—suppression of enemy air defenses. Command control will be difficult not only because of the density of systems and the intensity of the fight, but also because of extensive electronic warfare aimed at disrupting operations. Mobility will be difficult to achieve because of considerable numbers of countermobility factors such as natural and man-made obstacles, destroyed equipment and units, artificially created smoke, the smoke and dust of battle, and disrupted command control systems.

—Threat Soldiers and their Leaders—

The Threat soldier is first a field soldier. He spends most of each training day learning to live and fight in the field. For him, theory is no substitute for practice in field living and operations.

Most Threat soldiers are highly motivated, sometimes through fear of their leaders or as a result of political indoctrination. They believe in the rightness of their system—they know no other. In battle, Threat soldiers are tough, callous fighters. They are indifferent to hardship, especially

when they believe they are righteously defending their country against aggression.

Threat leaders demand instant and unquestioned obedience from their subordinates. Regimental and battalion commanders do not allow subordinate leaders to exercise initiative. Therefore, an unexpected situation on the battlefield can place the small unit leader at a momentary loss. If unforeseen successes occur, for example, small unit commanders will likely await new orders or respond in a stereotyped fashion rather than use initiative to take immediate advantage of the situation.

—Threat Tactics—

In the offense, following closely the concepts of mass, momentum, and continuous operations, the Threat employs tactics that focus clearly on concentrating numerically superior forces and firepower to accomplish a combination of frontal at-

tacks, enveloping maneuvers, holding attacks, and deep thrusts into the enemy rear by armor-heavy combined arms forces. Threat commanders believe they must build up an offensive momentum which will allow their forces to advance 30 to 50 kilometers a

day during nonnuclear operations, and 60 to 100 kilometers a day during nuclear operations. Momentum of the attack is sustained by echelonment of forces in depth so that succeeding echelons can pass through or around the first echelon, join the fight with fresh forces, and press on to achieve and maintain continuous operations.

The defense is seen as a temporary condition. Threat forces defend while seeking an opportunity to attack, or as an economy of force measure to support an attack elsewhere.

Combined arms operations and units are important considerations in Threat tactics. Motorized rifle troops and tanks consistently operate together; ground operations are always supported by extensively planned artillery fires. Units are organized to adapt easily to changing combat requirements by attaching required numbers of supporting units.

Echelonment of forces is an important Threat concept during both offensive and defensive operations. Commanders at all levels down to battalion determine the number of echelons required for an operation. It is normal to have two echelons. Commanders are permitted to retain reserves. These may include motorized rifle and tank units, antitank assets, and other units as required. The size of the reserve varies, but it is normally small. The reserve is the commander's contingency force. He uses it to replace destroyed units, repel counterattacks, provide local security against airborne/heliborne and partisan operations, and to act as an exploitation force to influence the outcome of the operation.

Threat forces that possess nuclear and chemical weapons consider their

employment in both offensive and defensive operations as the basis of all fire planning. Nuclear and chemical fires may be combined and coordinated with non-nuclear/chemical fires and air attacks, and exploited rapidly by ground and air assault forces. Nuclear and chemical weapons may be employed together or separately. Either may be employed in conjunction with biological agents. When nuclear and chemical weapons are used, Threat force tactics are similar to those employed on the nonnuclear battlefield except that greater dispersion of forces takes place; that is, frontages and attack zones are usually doubled.

In the attack, the enemy attempts to overwhelm the defense with the weight and speed of his attack, both day and night. The attack is conducted on a broad front, with formations moving on independent axes and accepting the risk of open flanks. To minimize this danger, the enemy may use nuclear or chemical weapons to neutralize ground dominating his axis of advance and to protect his flanks.

To avoid presenting nuclear targets, the enemy normally concentrates forces for only short periods of time. He may close with the defender either to destroy him or to insure that the defender cannot use nuclear weapons without endangering his own forces. Primary nuclear targets are nuclear and chemical weapons delivery systems, command control systems, logistic systems, and large concentrations of troops.

In the defense, Threat forces fight on the nuclear battlefield in much the same manner as they do on the conventional battlefield except that defending forces may be more widely dispersed. Primary nuclear targets are the same as when they are attacking.

Representative features of Threat tactics, which are emphasized repeatedly in his literature and which the division commander can expect to encounter frequently, include the following:

Seek surprise at all times. Prevent the enemy from reacting quickly and effectively, and paralyze the enemy's will to resist.

Mass forces in decisive areas by rapidly concentrating men, materiel, and firepower for the minimum time needed to rupture enemy defenses.

Breach enemy defenses at weakly defended positions and rapidly advance deep into rear areas.

Bypass strongly defended areas, leaving them to be destroyed by following echelons.

Advance quickly to build up momentum which, together with mass and continuous operations, will gain victory quickly.

Operate continuously during day and night, fair weather and foul, good visibility or poor, in order to keep maximum pressure on the enemy and destroy him.

Use massive artillery support including mortars, multiple rocket launchers, and antitank guns.

Deploy and sustain a dense and redundant air defense, and conduct airstrikes into the enemy's rear.

Achieve flank security by aggressive advance.

Destroy nuclear delivery means early.

Use radio-electronic combat to help destroy enemy command control.

Use combined arms forces echeloned in depth in both the attack and the defense.

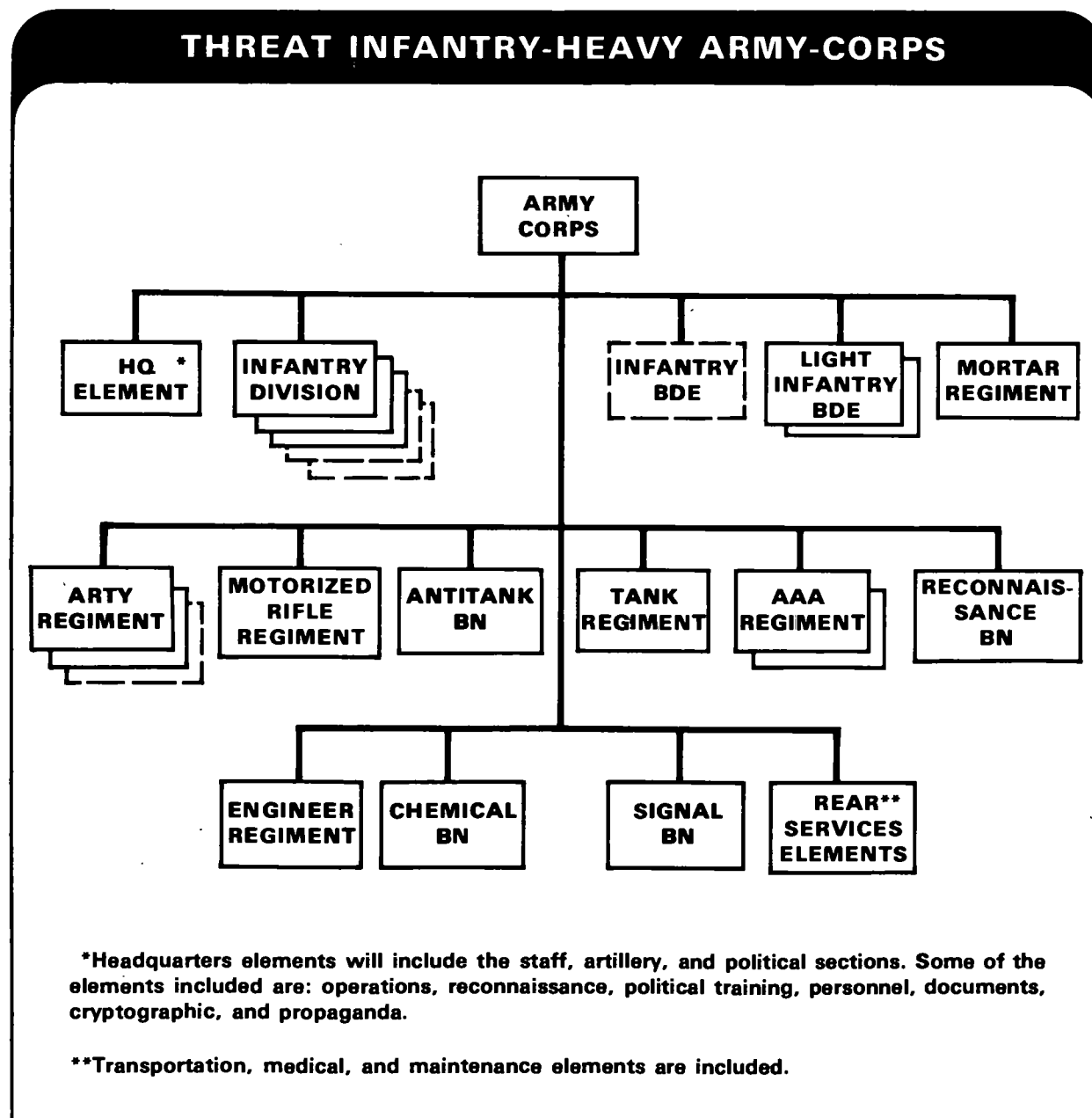
Breach obstacles—both natural and man-made—quickly.

INFANTRY-HEAVY THREAT

-Organization

The Threat infantry-heavy organization is most likely to be encountered in Asia. This organization has armored, mechanized, artillery, antitank, antiaircraft,

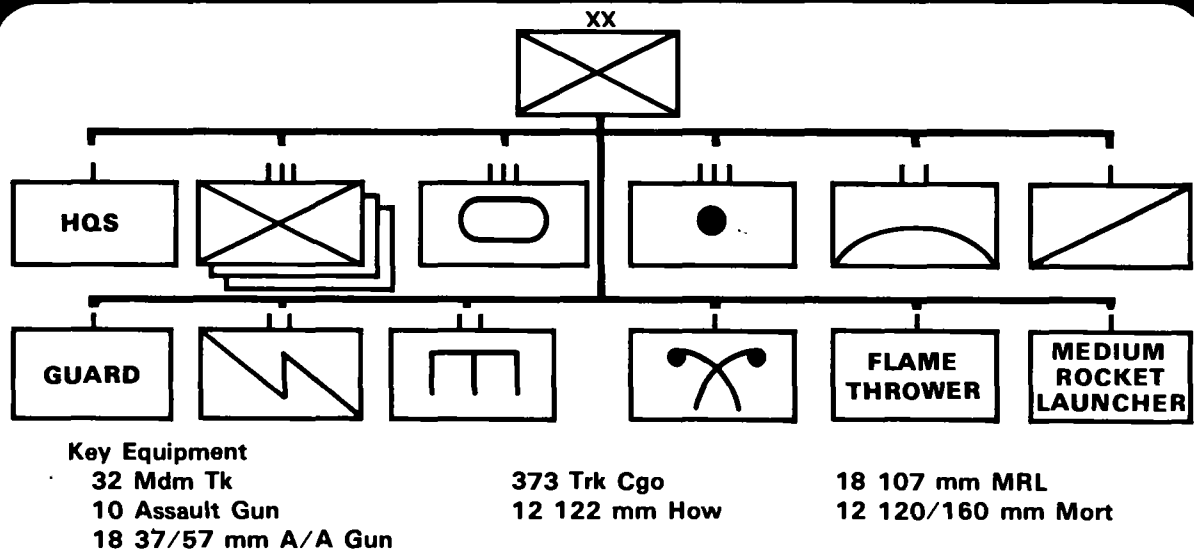
and engineer units; but the majority of its maneuver forces are infantry. The organization of an infantry army-corps is shown here.



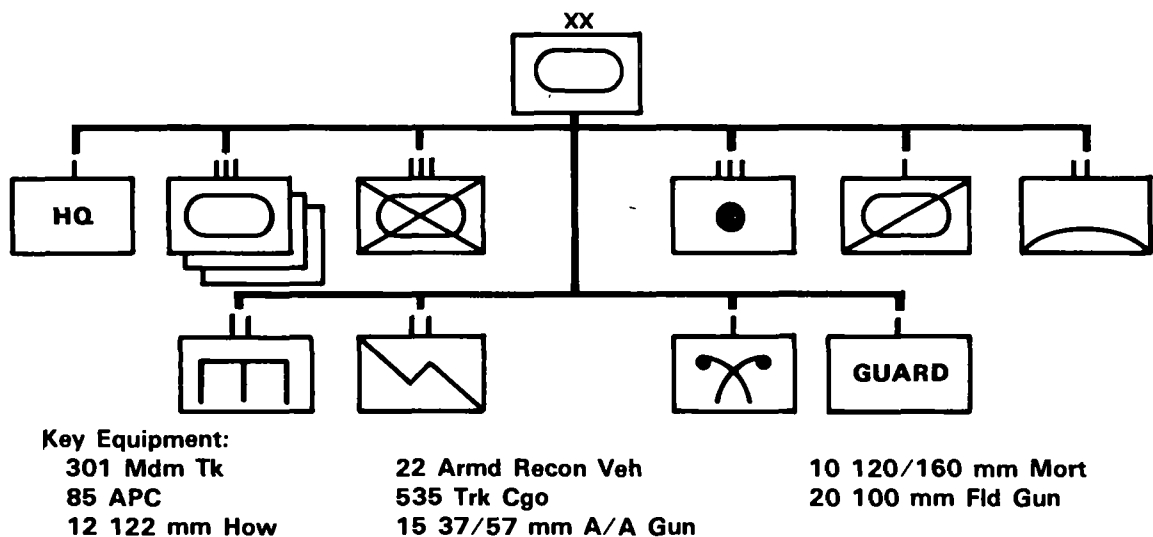
Threat infantry-heavy divisions have fixed organizations. There are very few armored divisions in the infantry-heavy force since shortages of equipment and

spare parts, and the lack of a well-organized logistics system to support these divisions limit their effectiveness.

THREAT INFANTRY DIVISION



INFANTRY-HEAVY THREAT ARMORED DIVISION



Threat Infantry Operations

Three factors guide Threat infantry forces:

- In offensive operations, attempts are made to get as close to the enemy as possible to deter his use of superior firepower to offset numerical inferiority.

- Infiltration is used to reduce enemy morale and block routes of withdrawal.

- Most movement and operations are conducted at night or in limited visibility to lessen the effects of enemy air operations.

OFFENSIVE OPERATIONS

Normally, an attack is conducted only with a superior force. Attacks are intended primarily to destroy the enemy, not to seize or retain terrain. However, in a limited conflict, terrain objectives are important to attacking forces.

Threat infantry recognizes three different types of attack that affect tactics at division level and below:

The meeting engagement, logically following the advance, is a collision between opposing forces on the move. It usually takes place before either force is fully deployed.

The hasty attack is conducted when possible from the march. Its purpose is to penetrate thinly occupied and hastily prepared defensive positions by rapid, deep thrusts to disrupt the entire defensive system.

The deliberate attack requires careful planning and a relatively long period of preparation. It is mounted against a well-prepared defense.

MEETING ENGAGEMENT. On contact, the point—consisting of a reinforced company—engages the enemy and attempts to destroy or contain him. If the point and advance party cannot overcome the resistance, they will quickly dig in and

engage the enemy while the advance guard proper (one regiment minus) attacks on one or both flanks to encircle and destroy the enemy or force his retirement.

The advance guard commander deploys his force on a wide front to seek the best avenues of approach to the enemy's flanks. The advance guard action is often a piecemeal operation in which units are allotted tasks and launched into action as they become available. These rapid attacks are part of the reconnaissance effort to define the enemy's FEBA and to locate weapon and gun positions. These attacks are also used to maintain the initiative, confuse the enemy, prevent him from organizing a counterattack, and keep him off balance until the main body arrives.

The division commander, with information gained by the advance guard, will deploy the main body as soon as possible to carry out an enveloping attack to annihilate the enemy. If the enemy withdraws before encirclement is complete, he will be pursued.

Rapid and bold offensive action is considered the key to success. Even against a stronger enemy, an envelopment is considered the best method of isolating and annihilating portions of the enemy column. The division commander, having allotted his commanders their tasks, places greater reliance on their initiative and judgment in

the meeting engagement—and in the pursuit that may follow a quick success—than on more deliberate combat operations.

During movement, tanks are normally allocated to the advance guard to support the infantry in its operations. The commander employs his armor carefully and is unlikely to commit his tanks until the enemy tank strength has been reduced by artillery and antitank fire. Then, tanks are massed in the main attack to destroy the remaining enemy tanks and strongpoints and to pursue the withdrawing forces.

Artillery units are deployed well forward in the advance to exploit the maximum range of the guns. On contact with the enemy, artillery units with the advance guard go into action as quickly as possible. Direct fire, including tank fire, constitutes a considerable portion of the initial support until artillery with the main body is able to reinforce the fire of the advance guard.

Engineers organic to the division and regiment clear or supervise the clearing or breaching of obstacles and minefields on the scale of three lanes per attacking rifle company. Mines are neutralized and removed for use elsewhere, although attempts may be made to detonate antipersonnel mines on the spot using long bamboo poles with hooks or bangalore torpedoes.

THE HASTY ATTACK. The hasty attack is made against an enemy occupying a hastily prepared defensive position. Threat infantry considers that such a position is unlikely to have a fully coordinated defensive plan and that its fire support will be relatively poor.

Threat infantry emphasizes speed in the planning, preparation, and execution of the attack consistent with an adequately coordinated fire plan. The “one point, two sides”

tactical technique (a main attack with simultaneous diversionary attacks) is normally used.

One point, two sides is a variation of the envelopment in which the enemy's weak spot is attacked simultaneously with feints and enveloping movements. “One point” means the concentration of overwhelmingly superior strength and attack at a selected weak point. “Two sides” means the launching of an attack where two or more supporting attacks are necessary to insure that the enemy can be enveloped and annihilated. This does not mean that the attack is limited to only two sides. When strength permits, attacks on three or more sides may be launched.

Divide and destroy is another principle applicable at all levels and is an alternative to the “one point, two sides” tactic. As the words imply, an attempt is made to penetrate the enemy position, split the defenders successively into smaller groups, and then attack to annihilate them by overwhelming force.

A hasty attack by an infantry division with two regiments in the first echelon and one regiment in the second may be launched on a frontage of about 6-7 kilometers. At times, three regiments may be deployed in line for the attack. The first-echelon regiment usually consists of two reinforced battalions, and the second, one battalion. The attack frontage is about 3 kilometers. The battalion attacks on a frontage of about 700 meters with two reinforced companies in the first echelon and one company in the second.

THE DELIBERATE ATTACK. The deliberate attack against a well-organized defensive position is characterized by careful planning, increased reconnaissance activities, and the deployment of numerically superior forces against specific

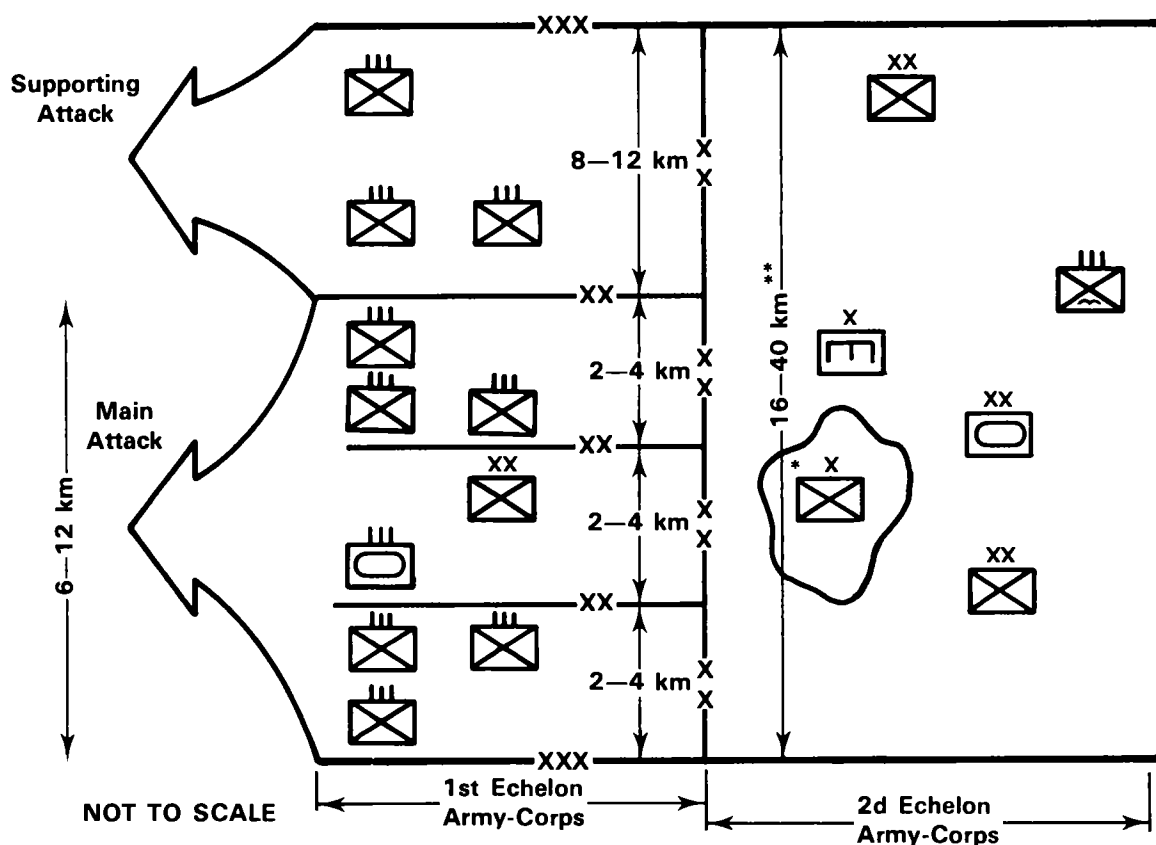
positions. In fact, an infantry division may be employed against a battalion position or a battalion against a platoon.

Listed below is a guide to the frontages for various units conducting a deliberate attack on the main axis:

DELIBERATE ATTACK FRONTAGES

● Army-Corps	4—8 kilometers	● Battalion	500—700 meters
● Division	2—4 kilometers	● Company	250—350 meters
● Regiment	1—2 kilometers	● Platoon	100—150 meters

THREAT INFANTRY-HEAVY OFFENSIVE OPERATIONS



*Light infantry brigade which infiltrates enemy defenses and conducts sapper operations.

**The Army-Corps sector may be 16—40 km wide; however, divisional forces may concentrate on a front of 2—4 km.

The division, usually controlled by army, attacks on a 4-kilometer front, normally in two echelons. Initial objectives are 3 or 4 kilometers behind the enemy FEBA, and final objectives may be as far behind the enemy FEBA as 10 to 15 kilometers. Depicted on the preceding page is an army-corps and its divisions in a deliberate attack.

The division commander may use one or more of his infantry regiments to try to outflank and encircle the enemy. The regiment attacks in two echelons. The first echelon consists of two reinforced battalions; the second echelon consists of one battalion on a frontage of up to 2 kilometers. Objectives are allocated to the first-echelon battalions only. The second echelon follows the first echelon and is usually given the mission of mopping up bypassed centers of resistance. Both echelons are considered to be committed.

The Reserve. Threat infantry does not categorize the reserve as an echelon in the offense. The second or support echelon is tasked to follow and support the assault echelon in the attack and is thus committed. This echelon is not a proper reserve although it may be assigned missions such as repelling counterattacks which are normally given to a reserve. The reserve proper varies in strength according to each combat situation. Normally, the reserve is an

infantry-heavy, motorized if possible, combined arms force.

Tanks, when available, are normally placed under the operational control of the regiment which in turn allocates them to the leading battalions in the first echelon of the attack. Tanks are massed to assist the infantry's advance into the depths of the enemy's defense.

At least one of the division's organic artillery battalions, consisting of three batteries, will normally be placed in direct support of each of the first-echelon regiments. Artillery from army resources will give additional fire support to the attacking regiments. Artillery is usually in position at least 24 hours before an attack.

The pursuit will start when an enemy is either routed or attempts to break contact and withdraw. When it becomes apparent that the enemy is planning a withdrawal or has just begun to withdraw, an attack is immediately launched to confuse him and disrupt his plans. Once it is clearly determined that a withdrawal is in progress, pursuit is begun. All units are committed immediately, even piecemeal, to insure that contact is maintained with the retreating enemy. Once pursuit is initiated, it can be terminated only on orders by higher echelons.

DEFENSIVE OPERATIONS

Defense is regarded as a temporary expedient adopted in order to:

- Preserve friendly forces while weakening those of the enemy.
- Gain time to concentrate forces for the offense or counteroffense.

- Economize forces to allow an offense to be mounted in another area.

- Consolidate captured objectives.
- Cover a withdrawal.

The Threat uses a position defense to retain terrain and a mobile defense when terrain is not important.

The infantry division normally participates in defensive operations as a part of a larger force. The army-corps commander prescribes the area to be defended by the division and coordinates the employment of artillery, armor, and barrier and denial operations.

At all levels, commanders divide their forces into two echelons. The area to be defended by a unit is divided into three positions:

- Security position—occupied by a screening force, reconnaissance units, and a security force.

- Main defensive position—occupied and defended by the first echelon.

- Position in depth—occupied and defended by the second echelon.

The following chart shows frontages and depths of the main defensive position:

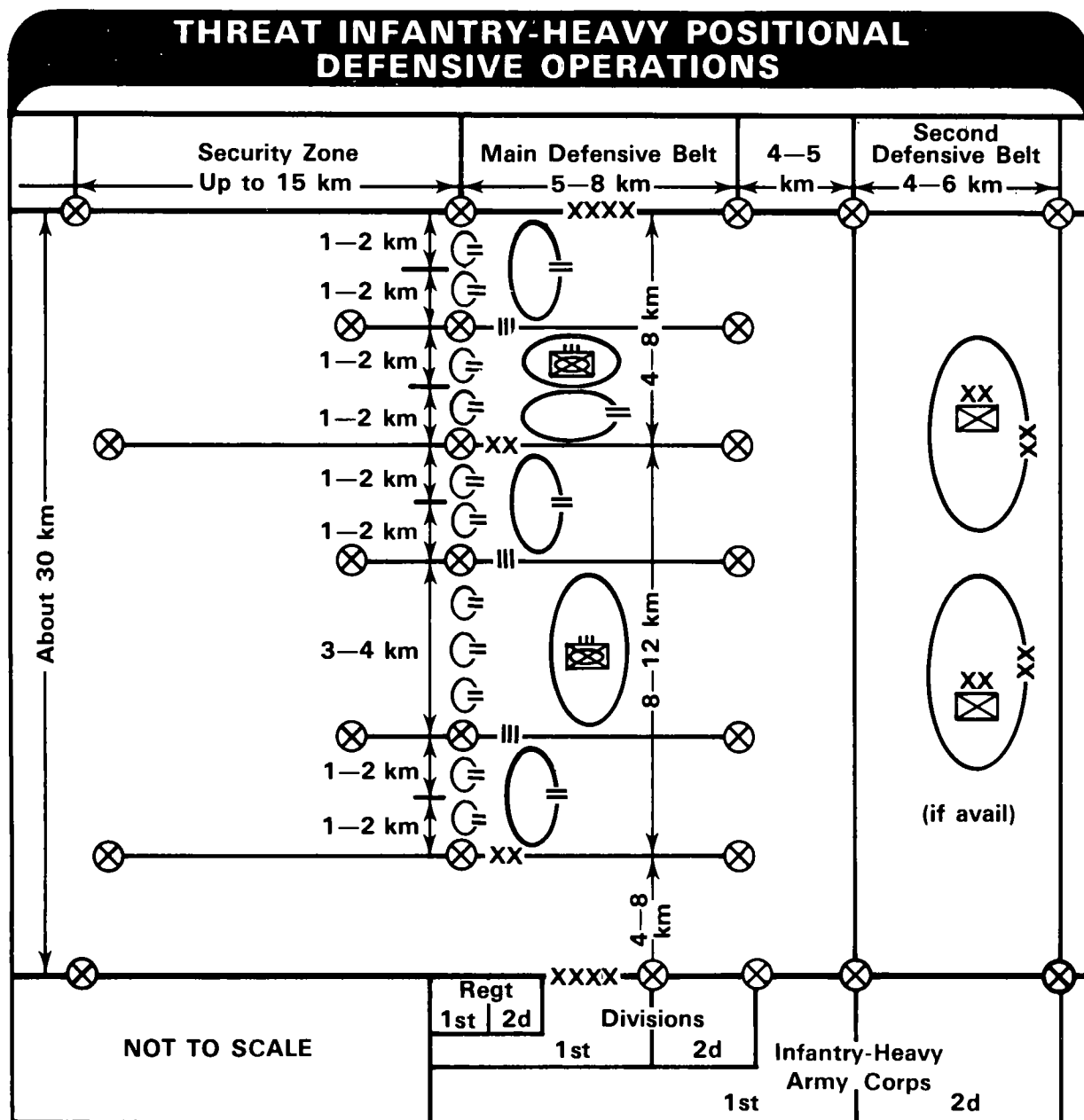
DEFENSIVE FRONTAGES AND DEPTHS			
	Mobile Defense Frontage	Position Defense Frontage	Depth
Division	16—24 km	8—12 km	9—18 km
Regiment	6—8 km	3—4 km	3—6 km
Battalion	2—4 km	1—2 km	1.5—3 km
Company	1—1.5 km	500—700 m	500—700 m
Platoon	500—700 m	250—350 m	250—350 m

The position defense (next page) is organized in great depth and is designed to deny vital areas to the attacker, to halt the attack, or to inflict significant losses on the attacker. Forward units decisively engage the attacker and hold at all costs. No thought is given to withdrawal to successive defensive positions. At the opportune time, forces mass to counterattack.

The ability of Threat infantry-heavy forces to conduct a mobile defense is limited. When conditions permit, the mobile defense enables the Threat to deploy his forces to attack the attacker. The mobile defense is conducted as a series of defensive battles fought at previously designated lines forward of a final interception line. It is

characterized by surprise, limited counterattacks, and ambushes carried out in strength aimed at inflicting maximum casualties on the enemy.

The Threat concept of a mobile defense is a “hit and run” type operation based on a war of movement and conducted as a series of defensive actions followed by withdrawals. Its aim is to inflict casualties on the enemy without sustaining unacceptable losses. As an enemy attacks, a series of withdrawals designed to draw the attack deep into Threat-controlled territory are conducted; then an overwhelming force attacks from all sides to annihilate overextended, fragmented, or temporarily isolated attacking forces.



RETROGRADE OPERATIONS

The aim of retrograde operations is to create a more favorable situation for the initiation or resumption of the offense. When possible, retrograde operations take place at night. When conducting a

retrograde operation by day, smoke is used to screen troop movement. Retrograde operations are covered by intense artillery fires and airstrikes and may be preceded by local counterattacks.

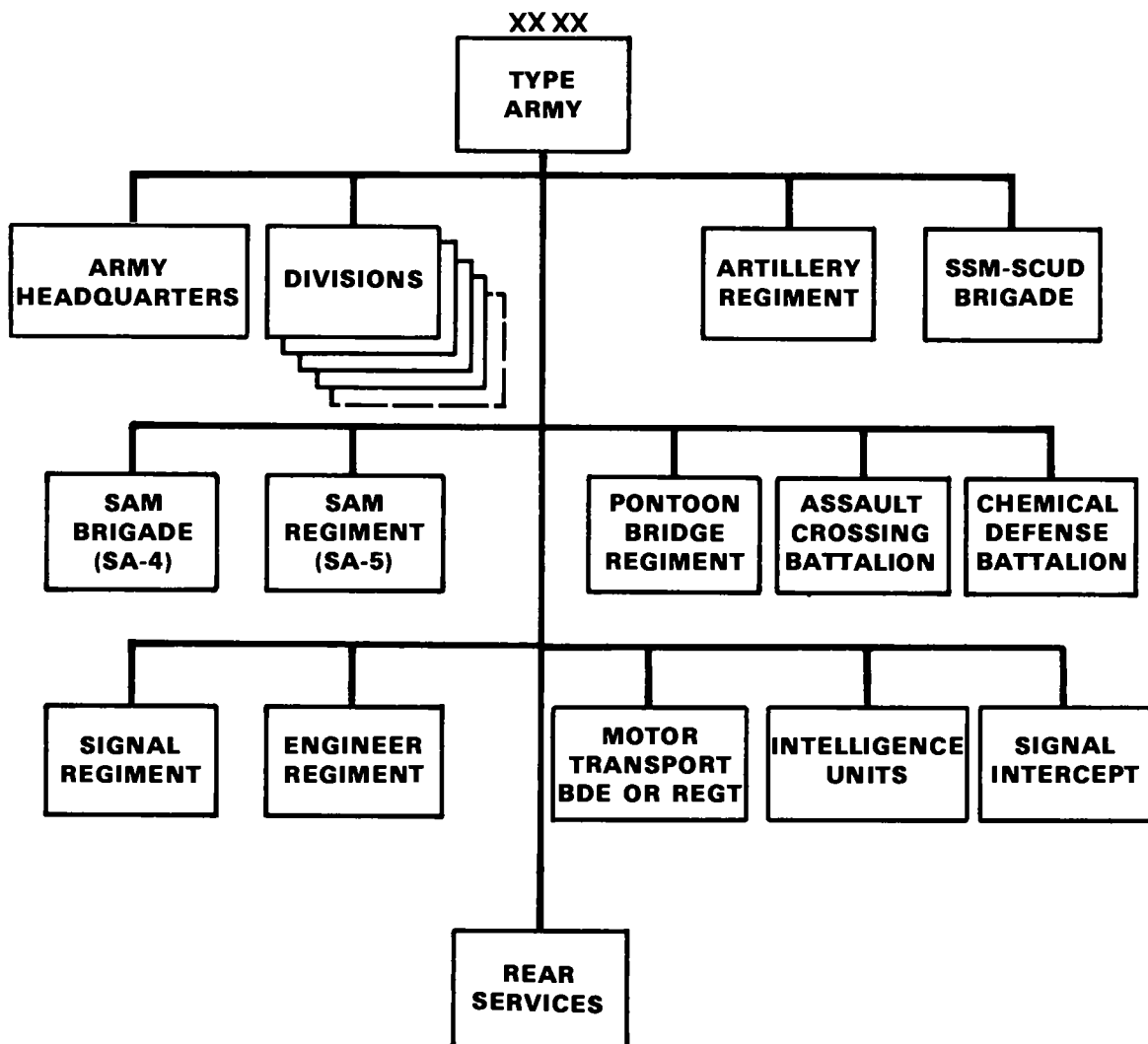
MECHANIZED THREAT

Organization

Threat motorized forces are organized into units that contain all the elements necessary to conduct combined arms

operations. Mechanized forces are organized into combined arms or tank armies generally as shown.

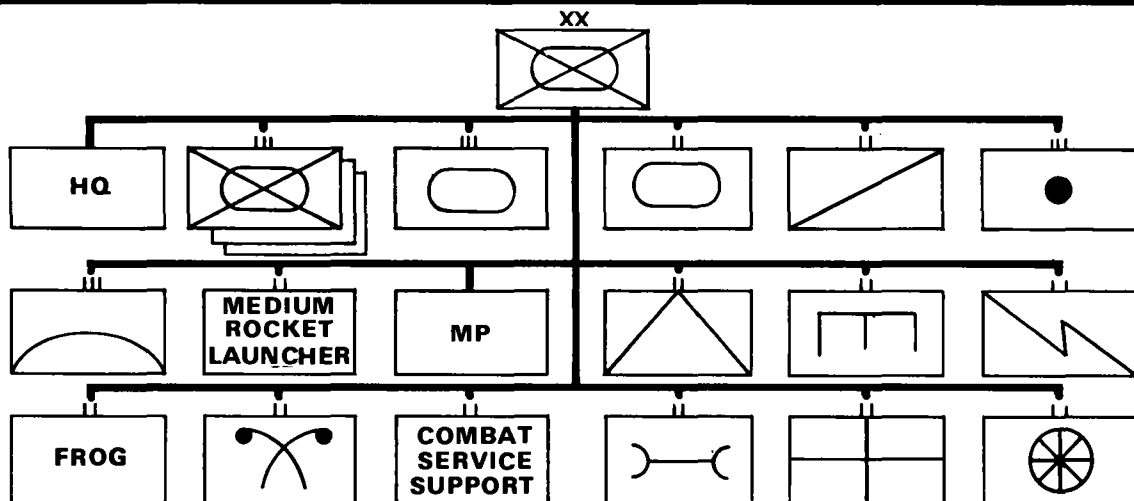
TANK OR COMBINED ARMS ARMY



Armies are composed of a variable number of motorized rifle divisions and

tank divisions with necessary combat support and combat service support units.

MOTORIZED RIFLE DIVISION



Key Equipment:

255 Mdm Tk

18 100 mm AT Gun

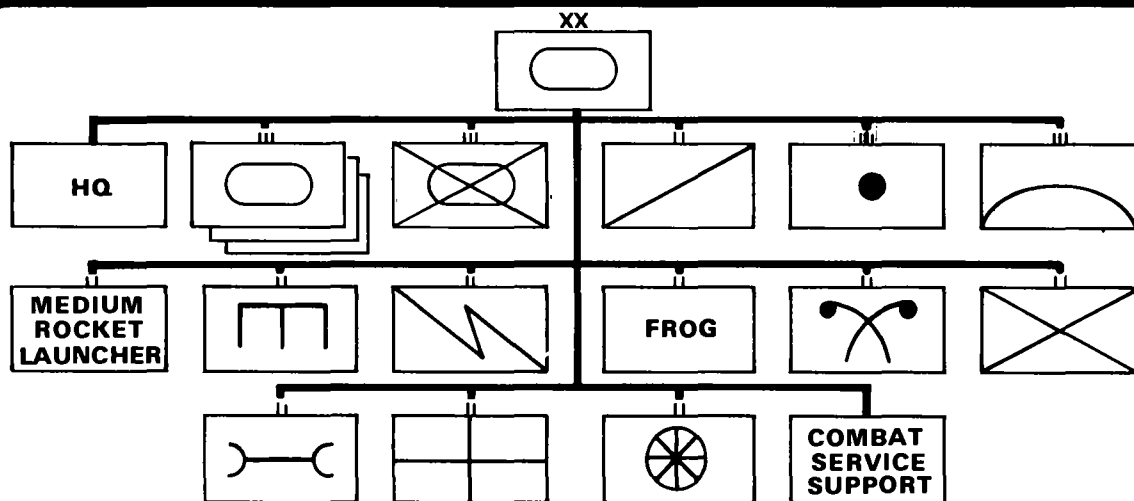
4 FROG Lchr

18 Rkt Lchrs

36 122-mm How

18 152 mm H

TANK DIVISION



Key Equipment:

325 Mdm Tk

54 122 mm How

4 FROG Lchr

18 Rkt Lchrs

Threat Mechanized Operations

OFFENSIVE OPERATIONS

In the offense, Threat armor concentrates numerically superior forces and firepower to carry out a combination of frontal attacks, enveloping maneuvers, and deep offensive thrusts into the enemy rear. Generally, the Threat will be willing to suffer considerable losses to accomplish the mission.

Threat forces feature large numbers of tanks, infantry and armored fighting vehicles, self-propelled artillery, self-propelled and rapidly launched tactical bridging, and supporting mobile equipment. They are also equipped with a comprehensive arsenal of air defense weapons including tactical aircraft, missiles, anti-aircraft artillery, and vehicle-mounted machineguns.

Threat armor offensive operations normally include:

- Meeting engagement.
- Breakthrough attack or deliberate attack.
- Pursuit (exploitation).

MEETING ENGAGEMENT. The army attack begins with first-echelon divisions moving to contact, often during periods of reduced visibility.

Attacking divisions move over multiple routes until forced to deploy. Each first-echelon division employs a tank-heavy advance guard up to 30 kilometers ahead of the main body. Its purpose is to roll back the defender's covering force and locate the main battle area. The advance guard for the division making the main effort may be as

much as a reinforced regiment from the army second echelon; otherwise, the advance guard is provided by one reinforced battalion from each first-echelon regiment.

Mobile air defense, automatic weapons, and low-altitude surface-to-air missiles (SAMs) are integrated by individual piece into march columns. High-altitude SAM units normally move as a battery and may be integrated into march columns or move along separate routes to insure adequate coverage. Towed AA guns also move as a battery integrated into march columns.

When contact is made, the advance guard attempts to destroy the enemy force. If not immediately successful, the advance guard attempts to locate enemy flanks, gaps, and weak points while the main body deploys. Supported by available artillery and air, the main body then conducts a hasty attack from march column against the enemy flanks and rear.

If this proves unsuccessful, the Threat division commander may attempt additional hasty attacks from new directions. If still unsuccessful, he will probably halt and prepare to conduct a breakthrough attack.

BREAKTHROUGH. One first-echelon division is normally designated to conduct the main attack (breakthrough) while other division(s) conduct supporting attacks.

The Threat prefers to conduct the operation from the line of march, using the division previously designated for the Army's main effort as the breakthrough division. Under these circumstances, little lateral movement of units is necessary. If a

Although there is little lateral movement, there may be considerable forward and rearward movement of artillery and ammunition vehicles as artillery is repositioned and organized into regimental and divisional artillery groups. Each group consists of from two to four battalions. An army artillery group consisting of two to four battalions of 122-mm, 130-mm, and 152-mm guns may be formed to provide additional support and counterbattery fires.

Once the artillery is in position, a massive preparation is fired lasting from 30 minutes to an hour or more. In order to fire the preparation, it is necessary to move considerable ammunition to firing positions.

During the preparation, maneuver units deploy into battalion and company columns, gradually narrowing the width of advance. The rate of advance is carefully controlled. When preparatory fires have ceased or have been shifted into the depth of the enemy defense, the assault begins. At this point, the breakthrough division front has narrowed to approximately 4 kilometers.

[illegible]

First-echelon regiments try to rupture initial defensive positions, thereby creating a gap in the defense. Tanks normally lead the attack. Motorized rifle troops remain mounted in infantry fighting vehicles and follow immediately behind tanks. If the defense, particularly the antitank defense, is too strong, motorized rifle troops dismount and assault on foot with the BMP providing fire support from the rear.

Second-echelon regiments of the breakthrough division pass through gaps created by the first echelon, thus widening the initial breach. If the breakthrough has been successful, a gap of approximately 20 kilometers in the defense should exist.

Second-echelon divisions then move forward and pass through the first echelon in order to strike deep into the defender's rear, defeat whatever forces are there, and destroy or capture command posts, depots, and communications facilities.

If the breakthrough division is not successful, the front commander may:

- Continue the attack, using second-echelon divisions.
- Transfer the main effort to a sector that is enjoying more success.
- Order a halt to the attack, establish a defense, withdraw breakthrough divisions, and conduct a reassessment of Front capabilities.

If the breakthrough successfully disrupts the defense, front second-echelon tank or combined arms armies are committed through gaps to exploit initial successes. Once into the enemy's rear, divisions move in column or multiple routes as in a movement to contact.

The Pursuit. The threat considers the pursuit an offensive operation designed to complete the destruction of the enemy. Rather than follow a retreating enemy, pursuing units move along routes parallel to the enemy's retreat, attempting to out-distance elements of the enemy force, cut withdrawing columns into segments, and destroy them. Helicopters are employed to locate and engage retreating units and guide pursuing forces. Airborne, airlanded, and airmobile forces are used to control critical terrain and block or slow enemy withdrawal.

Listed below is a guide to the frontages for various units conducting a deliberate attack on the main axis:

DELIBERATE ATTACK FRONTAGES

- | | |
|-------------|------------------|
| • Army | 30 kilometers |
| • Division | 10—16 kilometers |
| • Regiment | 5—8 kilometers |
| • Battalion | 1—1.5 kilometers |
| • Company | 400—600 meters |

DEFENSIVE OPERATIONS

Threat doctrine identifies motorized rifle units as best suited for the conduct of defensive operations. Armored units defend in the first echelon only when necessary

and then only temporarily. A defending first-echelon tank unit is replaced by a motorized rifle division at the earliest possible time.

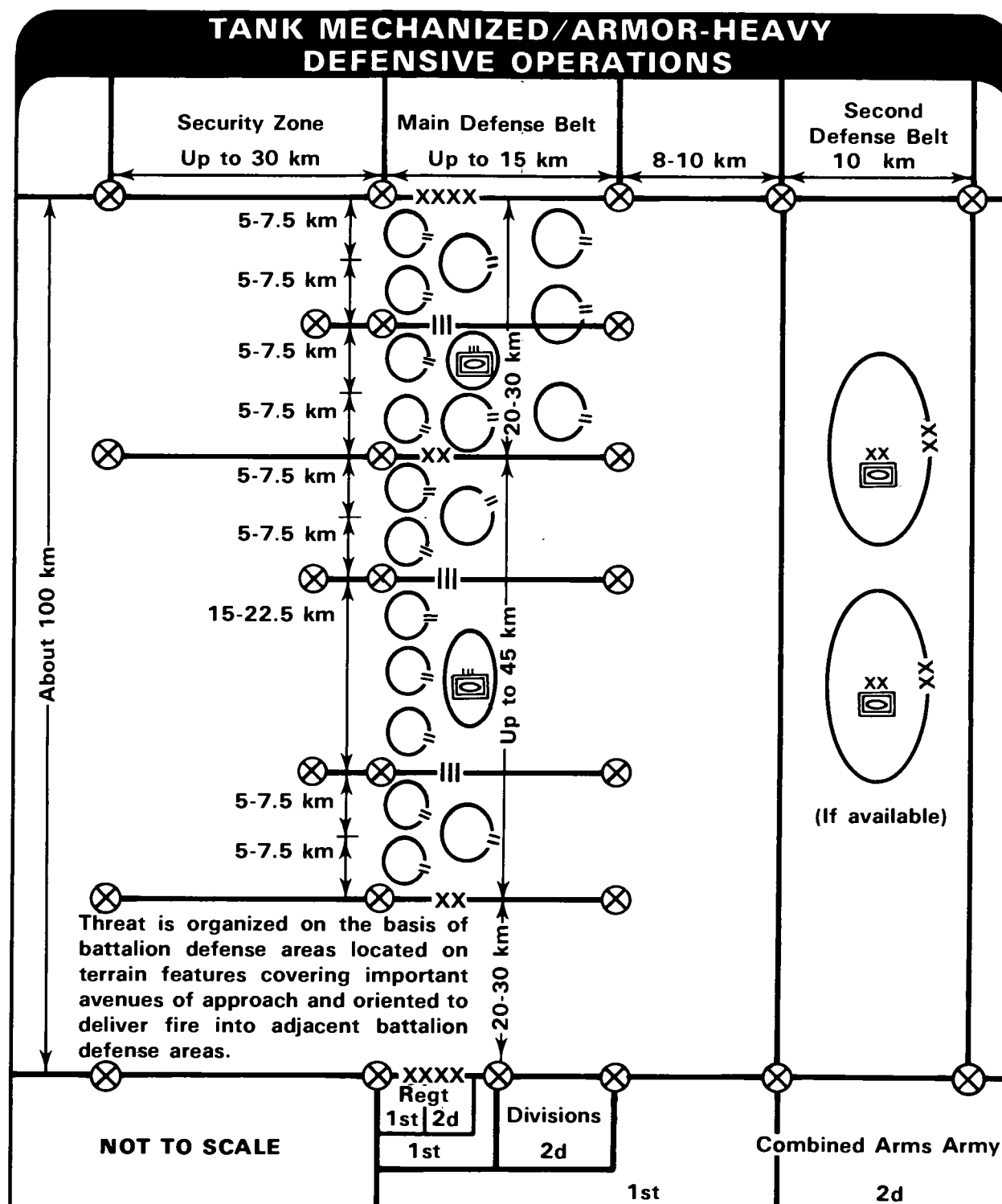
The Threat conducts either a hasty or deliberate defense. The hasty defense is conducted for short durations, and it is the most common form of defense. This form of the defense provides for rapid transition to the offense or to a well-prepared deliberate defense. The hasty defense is normally employed by units on the move that are forced to stop in place.

The deliberate defense is used when the advance is halted for more than a few hours. When a deliberate defense is conducted, the Threat normally establishes a security zone and defensive belts heavily supported by artillery, air defense systems, antitank weapons, engineer units, and aviation units. Each of the defensive belts contains a series of well-fortified strongpoints located to cover the most likely avenues of approach. Alternate positions are prepared along other less likely avenues of approach. Some armor units are assigned reserve missions for conducting the counterattack.

Listed below are the frontages and depths for various size units in the main defensive position:

DEFENSIVE FRONTAGES AND DEPTHS

	Frontage	Depth
Army	100 km	100—120 km
Division	20—30 km	15 km
Regiment	10—15 km	8—10 km
Battalion	5—7.5 km	5—7.5 km
Company	1000—1500 m	500 m
Platoon	300—400 m	200—300 m





CHAPTER 3

Preparation for Combat

The commander and his staff prepare for combat by analyzing missions and setting forth tasks to be accomplished, preparing and issuing plans and orders, and executing and supervising the execution of orders.

THE COMMANDER AND HIS STAFF

—The Commander—

It is the division commander who allocates maneuver battalions and assigns missions to brigades in order to apply combat power at the right time and place. He establishes intelligence-collection requirements to obtain information as to where and when to mass units. He sets

priorities for fire support, air defense, engineer support, and electronic warfare operations. He also sets priorities for combat service support (ammunition, fuel, and maintenance) which must be concentrated to support the combat operations. He organizes the division for combat.

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--- The Commander's Staff ---

To assist him, the division commander has two assistant division commanders (ADCs); a chief of staff; and a general, special, and personal staff. While the ADCs may be employed as the division commander directs, it is normal to find one assistant assigned to operational and training activities and the other assigned to support activities. The chief of staff is the principal staff coordinator for the commander and is responsible for the activities of the general and special staffs. The personal staff works under the direct supervision of the commander and provides for his needs.

The special staff provides technical expertise for the commander in a number of areas, for example: communications and electronics, engineer, transportation, chemical, and finance. In some cases, unit commanders in the division also function as special staff officers, for example: the air defense artillery, engineer, and signal battalion commanders.

The general staff assists the commander in the broad areas of personnel (G1), intelligence (G2), operations (G3), logistics (G4), and civil/military operations (CMO) (G5). These are areas in which the division will normally receive missions, tasks, or other requirements. The staff groups assist the commander by providing him with information, analyses, and estimates which facilitate decisionmaking. The staff prepares and disseminates the plans and orders necessary to transmit the commander's decisions to subordinate commands.

Often, the situation will require the commander to transmit his decisions to his subordinate commanders face to face. He will update the staff as time permits. The staff assists the subordinate commands in the execution of their orders. It is incumbent on the staff to understand the commander's concept throughout a situation, to be flexible, and to be technically and tactically proficient.

--- The Decisionmaking Process ---

When a mission is received, decisionmaking begins. Decisionmaking is that process used by the commander to identify his tasks, develop his plan, and issue his instructions to subordinates in order to accomplish the mission. The lower the echelon, the more simple, direct, and rapid the process will be. Once the operation starts, subsequent orders must be issued rapidly, under the pressure of battle. This means they must be simple. Any decisionmaking process resulting in complex orders will not work in modern battle.

For any operation, the commander, with assistance from his staff, must first estimate the situation and then reach a

decision. The estimate is normally mental and is done as quickly as possible. It is based on:

- ④ **Mission analysis.**
- ② **Information available about the enemy situation.**
- ③ **Terrain over which the division must operate.**
- ④ **Probable weather conditions during the operation.**
- ⑤ **Forces available to the division.**
- ⑥ **Time available to prepare for the operation.**

1 **Mission analysis** is a matter of determining what must be done, and when and where it is to be done, by analyzing specified and implied tasks contained in the mission assigned by higher headquarters.

2 The **enemy situation** is analyzed to determine the enemy's probable influence on the division's operations. To analyze the enemy situation, the commander must put himself in the enemy's position. Although the commander will seldom have all the information about the enemy he would like, he uses the best information available. If he

has a thorough understanding of enemy organization, tactics, and intelligence concerning dispositions, strengths, and weaknesses, he can determine, with a reasonable degree of certainty, enemy capabilities, probable best courses of action, and their influence on his operation. Any additional information required to complete the estimate must be made known to the G2 so that he can begin obtaining it.

3 **Terrain** often has a decisive influence on an estimate and on the development of a tactical plan.

Terrain is evaluated in terms of:

- **Observation.** Observation of the battlefield is necessary in order to bring effective fire to bear upon the enemy and to prevent surprise of the defending force.
- **Cover and concealment.** The division uses cover to reduce unit vulnerability to enemy fires, and concealment to achieve surprise.
- **Fields of fire.** Fields of fire are important to the defender. The attacker seeks to make his main effort where the defender does not have the advantage of good fields of fire. The attacker seeks terrain providing good cover and concealment throughout his advance.
- **Obstacles.** Obstacles are natural or manmade features which impede movement. The defender uses obstacles to slow or canalize the enemy advance. The attacker seeks to avoid them.
- **Routes of movement and communication.** Analysis of friendly and enemy routes of movement and com-

munication permit the rapid concentration of combat, combat support, and combat service support elements during both offensive and defensive operations.

Brigades move their battalions or task forces from one covered and concealed position to the next using covered routes as much as possible. Divisions use lines of communication to support the maneuver of all the combined arms and supporting services. When defending, movement of supplies and forward or lateral movement of combat and combat support units may be most important. In the attack, rapid advance of combat formations and supply trains is essential.

Although much can be learned from studying maps, the division commander and key members of his staff should personally reconnoiter as much of the operational area as possible. The area where the main effort is planned or expected to occur is particularly important.

Land battle takes place amid natural and manmade variations in terrain. How to best accomplish the mission is frequently influenced by terrain in terms of observation, cover and concealment, fields of fire, obstacles, and routes of movement and communication, as well as by trafficability and key terrain. For example, when defending, it is often necessary either to occupy ground dominating the battlefield or to deny that ground to the enemy.

During offensive operations, ground dominating the battlefield may become the immediate objective of the attack.

When properly used, terrain not only maximizes the effectiveness of the division's weapons, it also minimizes their vulnerability to enemy weapons as well.

Terrain reinforcement is a combat power element consisting of degradation of enemy mobility and enhancement of friendly survivability. The enemy's mobility is degraded by using existing terrain obstacles to advantage and enhancing their effect on the enemy with the emplacement of reinforcing obstacles. The survivability of friendly forces is improved by the construction of fighting positions. By reinforcing terrain, commanders:

- Maximize cover and concealment of their force.
- Canalize the enemy away from cover and concealment and into fields of fire of friendly weapons.
- Break up the continuity of enemy formations.
- Distract enemy attention from friendly positions.

- Increase the engagement time available to their weapon systems.

- Multiply combat power.

4 **Weather** affects trafficability and visibility. It can influence the ability to rapidly concentrate the force and sustain it. Good weather and trafficability can facilitate rapid movement. Bad weather can inhibit movement, reduce the ability of both enemy and friendly forces to acquire targets at long ranges, and limit use of aviation units and USAF aircraft. Estimates are based on weather conditions that will probably occur rather than on those that one might desire.

5 **Forces available** can influence the battle. To organize for combat, it is necessary to know the status of the division. The status of battalions should be defined in terms of the number and proficiency of individual soldiers, leaders, crewmen, and subunits, and the operational equipment that can enter or support the battle.

Combat service support at division should be defined in terms of the ability of combat service support units to sustain the force throughout the operation. The ability to evacuate, repair, arm, refuel, and man critical weapons in forward areas, and to treat and evacuate wounded from forward areas is very important to successful mission accomplishment. The ability of the corps to replace critical weapon systems and crews lost in battle must be known.

Therefore, the staff must maintain the necessary information for the commander that indicates the status of training, personnel, and equipment, and the availability of supplies in comparison to what is re-

quired. This comparison will reflect the ability of the division to sustain the operation as well as determine any additional support that may be required from corps.

Morale is an intangible factor that can greatly affect the condition of a unit. Historically, there are many examples of smaller forces defeating larger forces because the larger force, though fully armed and manned, did not have the will to win.

6 Time influences every action of the division. Time available to prepare for combat operations must be used judiciously. It is always necessary to consider how long it takes subordinate units to prepare and to move into position ready to fight or support. Commanders should not use time needed by subordinates to prepare their part of the operation. A reasonable guide is to use no more than one-third of the planning time available, leaving the remainder for subordinate commanders.

STAFF ESTIMATE

Much of the information required by the commander to complete his estimate comes from the staff. Each staff officer provides his estimate of the situation to the extent the division commander may require. A staff officer's estimate highlights significant aspects of the situation and how best to use the means available to accomplish the mission as viewed by the staff

officer. The G4, for example, may provide a combat service support estimate in cooperation with the G1. Normally, the G2 provides an estimate of the weather, terrain, and enemy situation. The G3 may provide an estimate of courses of action. Special staff officers may also be called upon for their estimates. The chief of staff insures that their activities are coordinated.

THE COMMANDER'S CONCEPT

As part of his estimate, the commander considers the courses of action open to him to conduct his operation. He compares courses of action, considering the mission, enemy, terrain, weather, friendly forces, and time available. The commander often does this together with his assistant division commanders, the chief of staff, the G2, the G3, the division artillery commander, and other staff officers. After considering the advantages and disadvantages of each course of action, the commander decides on the course of action most likely to succeed. This decision is normally issued to key members of the staff as the commander's

concept of the operation. Subordinate commanders may also be present.

The concept of the operation is the commander's description of how he sees the battle being fought. It is described in sufficient detail to enable staff officers and subordinate commanders to understand exactly what they are to do so that, if necessary, they can fight the battle in the absence of further instructions. The decisionmaking process is described in detail in FM 101-5, **Staff Organization and Operation**.

Plans and Orders

Plans and orders are the expression of the commander's concept. Plans and orders must be simple, concise, and clear. Plans are normally prepared in writing for future operations which may or may not occur. Orders are issued when new instructions are necessary.

Although orders may sometimes be issued in writing, they are most often issued orally. In any case, the best way to issue orders to subordinate commanders is face to face.

A warning order is issued by the division commander immediately following receipt of a mission. Its purpose is to alert subordinate commanders to an impending operation so that they can begin to prepare. A warning order is normally issued orally. It contains as much information as may be available at the time; but it should contain at least the nature and time of the

operation, and the time and place the entire order is to be issued.

An operations order details the coordinated action necessary to execute the commander's concept. The order follows a five paragraph standard format and is usually issued orally by the commander. A written operations order may be prepared before the operation if time permits. One is usually prepared after the operation for historical purposes.

A fragmentary order is issued to modify an operations order, or to replace an operations order if time does not permit preparation of a new one. It includes any items of critical importance that have changed since the last order. Fragmentary orders are normally issued orally, although they may be issued in writing.

Orders Group

It is useful to have a standing list of key personnel whom the commander desires to be present when he issues his concept of the operation and his order. This is called an

orders group. Such a group normally includes assistant division commanders, the chief of staff, principal staff officers, and key subordinate commanders.

Staff Operations

The staff assists the commander by providing information and counsel; by preparing such estimates, plans, and orders as the commander may direct; and by exercising such supervision over the execution of his orders as he may prescribe. It is important for staff officers to remember that they are not in the chain of command, that their role is one of only providing assistance to their commander.

The commander must remember that staffs have some real and ever-present limitations. Staffs do routine things; an efficient, well organized, and highly motivated staff can do routine things very well. But as a general rule, the long-term goals of the organization, the deciding—the cutting off of debate to get something moving—and the good initiatives will not automatically result from staff work as a matter of course.

The commander identifies goals, decides where his outfit is going, announces those goals and directions, and takes the initiative. The commander may rely on a staff to some extent for these matters, but he must take the initiative himself. If he does not, his headquarters may become

bureaucratic, lethargic, inactive, indecisive, unresponsive, and thus ineffective. The commander may receive good ideas from a small handful of staff or other officers in his organization, but he is the one who must ultimately translate these ideas into action.

— Reports —

Critical information of immediate importance to the commander is reported expeditiously. Less critical information is provided to the staff through periodic, spot, or summary reports. The commander must specify what information can be reported to the staff through these reports. As a general rule, they should receive the following:

- Enemy location, size, activity, or direction of movement, and type of unit.
- Composition, location, and activity of friendly battalion-size maneuver and fire support elements.
- Availability and status of attack helicopter units and offensive air support.
- Status of fuel and ammunition of battalion task forces in contact, and of their fire support elements.
- Combat vehicle losses of battalion task forces and their fire support elements.

The commander and his staff use reports to obtain and distribute information about the command to subordinate, higher, and adjacent headquarters. Only those reports required to meet essential needs for information and those requested by higher headquarters should be required of subordinate commands. Continued review of the content and validity of recurring reports eliminates unnecessary items and duplications.

As the pace of battle quickens, it will be necessary for the commander to take extraordinary measures to obtain good, timely information about where his units are, what they are doing, and what the enemy is doing. In the heat of battle, information is often difficult to obtain. The best information comes from units in contact. However, commanders of these units are usually the busiest and have little time to report information to a superior headquarters other than through requests for additional support. Nonetheless, the division commander must establish a system to get the necessary information to direct the battle.

The fastest way to get information is by monitoring command nets of leading or engaged battalion task forces and fire control nets of direct support field artillery. Division command posts are seldom able to do this because of range limitations of the FM radios used by battalions for command control. Thus, information from leading task forces is reported sequentially from platoon to company, to battalion, to brigade, and then to division.

With this system, there will always be a considerable loss of time in reporting and loss of accuracy of content. This is true of reports from subordinate elements, from higher headquarters, and from agencies outside the division on which the commander depends for vital combat information.

Every echelon, every node, every terminal, or other link through which information passes slows its transmission and distorts its content. Commanders must be aware of this problem and constantly seek

ways to limit its effect on operations. Certain mobile ground and air units, for example, could be task organized under division control and thus reduce reporting lag time.

Displays

Staff sections should maintain only the minimum number of informational displays required to keep members of their sections and the commander informed.

The operations element in the tactical command post normally maintains a situation map. The intelligence officer is responsible for insuring that the enemy situation and other related information is correctly posted on this map. The main command post also maintains a situation map that graphically portrays information passed from the tactical command post and information received from other sources.

These situational displays must be integrated. It is not possible to operate if intelligence, operations, logistics, and other staff elements do not contribute to an in-

tegrated posting of clearly identified information elements on a central situational display. A battle information report is an ideal vehicle for focusing staff attention on what must be posted on this central display. Staff elements may maintain separate, more detailed displays for the conduct of the staff operations, but their primary responsibility is to the commander's need for information and the displays that provide it to him. Staff journals are normally maintained to record significant events.

Simple displays that show the status of combat units are also useful tools for the commander and staff. Such displays should be designed to reflect the status of major weapon systems, personnel, crews, and the amounts of fuel and ammunition available throughout the division.

COMBAT INFORMATION AND INTELLIGENCE

In order to adequately prepare for combat operations, the division commander must have information about the enemy and the area of operations. Zones of interest for each level of command have been identified to guide intelligence collection and distribution. The division commander's zone of interest extends to a depth of approximately 150 kilometers, an area including the first-echelon divisions of the second-echelon armies. The zone of interest is not intended to imply that the commander must have organic resources to either see or fight to the full depth of the zone, but rather that necessary combat

information and intelligence about the enemy within the zone be provided so that combat operations may be conducted.

Some of this information will be fairly constant—for example, terrain, weather patterns and expectations, enemy organization, equipment, and general capabilities. This kind of information provides the general backdrop against which all operations are conducted.

The most important information the commander must have is the relatively perishable knowledge of how things are

going—what events are in progress as his command pursues its mission. The closer to real time a commander knows this kind of information, the greater are his chances of influencing the battle. Intelligence summaries, periodic intelligence reports, and scheduled briefings, while appropriate under some circumstances, cannot serve commanders who must have immediate information about situations that will change very rapidly.

Therefore, it is necessary to consider the difference between intelligence and combat information. If raw data can be used as received to make decisions about fire or maneuver, with little or no interpretation or integration with other data, it is considered combat information. If the raw data requires validation, integration, comparison, or any other form of analysis beyond an almost perfunctory check, it becomes intelligence. In other words, the definition depends on how the information is handled and how it is used.

Once an operation begins, most intelligence acquired by the division is a byproduct of combat operations. Combat information, even though used, may still be of vital importance as intelligence. In such a case, the same data satisfies both definitions, but in turn—combat information first, then intelligence.

Intelligence-collection systems acquire a great deal of combat information. These systems must be designed to search out and focus on the perishable data the commander needs to direct the battle. The commander must specify what he needs to know, then insure that his intelligence systems are focused on that information, and that a system exists for bringing it to him quickly, wherever he is on the field of battle. The commander must also insure that linkages exist in the intelligence-collection systems to

feed combat information to all who need it as rapidly as possible. Such information must be routinely sent to higher, lower, and adjacent commands for fusion—that is, for processing into the broader, general informational data base called intelligence.

The first step to be taken by the commander and his staff in preparing for battle is to gather information about the enemy, weather, and terrain. The process by which this is done is called intelligence preparation of the battlefield (IPB). IPB is a systematic and comprehensive way to look at the battlefield which explores every aspect of terrain, weather, and the enemy. However, since it is primarily done before the battle starts, *analysis* of the weather and terrain takes place concurrently with the *collection* of information about the potential enemy. A detailed study of the terrain and weather serves as a backdrop against which the potential enemy is viewed. In initial analysis, a series of overlays can be prepared to depict characteristics of the terrain and the effects of weather. IPB analytical overlays may include:

- Obstacles (manmade, natural, hydrographic, potential, easily eliminated, easily improved).
- Avenues of approach (good, poor, best, by means of movement—foot troops, wheeled or tracked vehicles).
- Trafficability (by type of soil and degree of slope, by type of vehicle, under different weather conditions—rain, snow, drought, freezing, melting).
- Visibility and intervisibility (limited by vegetation, season, weather—fog, rain, clear).

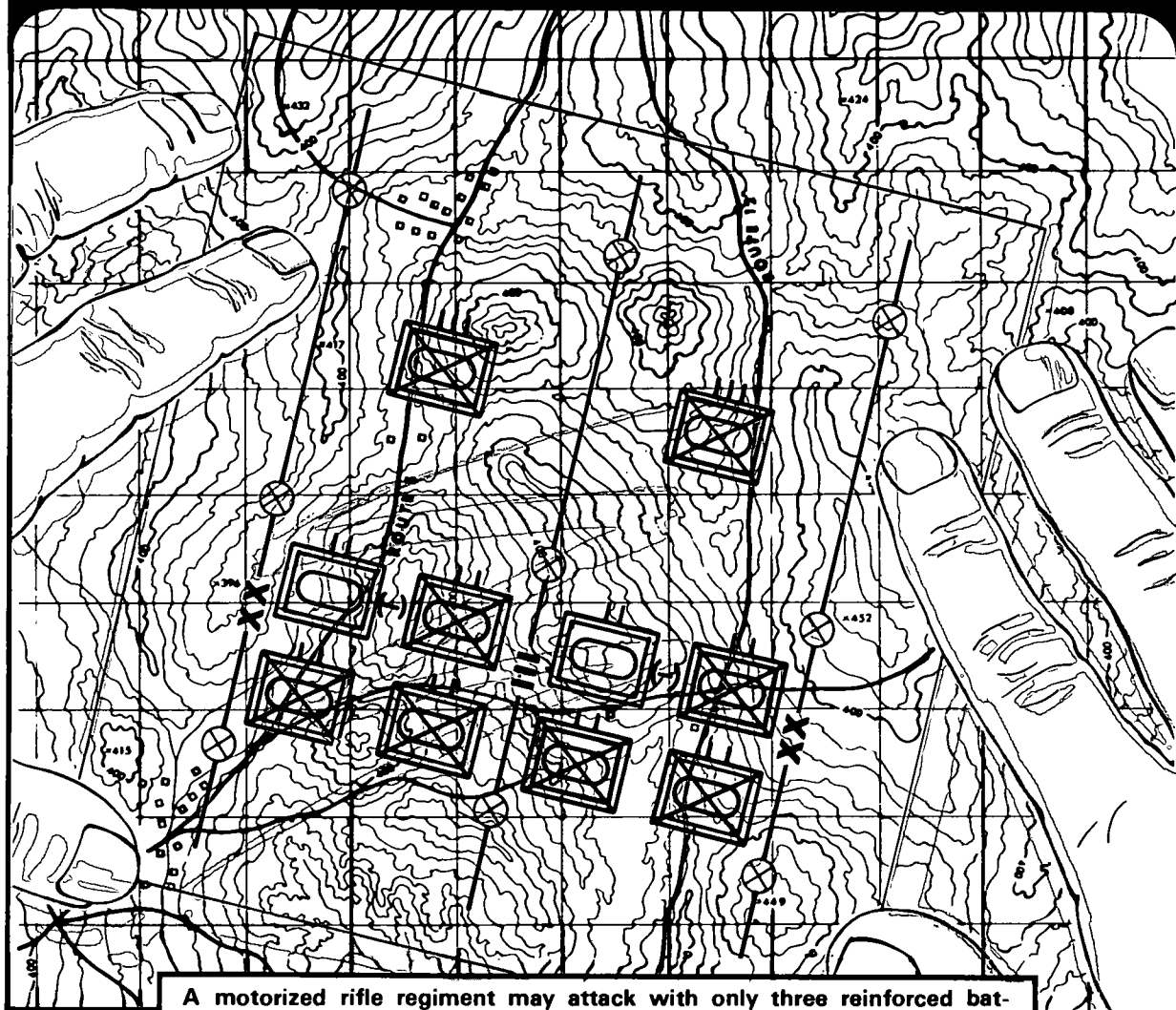
Templates can be developed that permit the division commander to acquire and pass

to his brigade commanders combat information before it has been analyzed and converted to intelligence. For example, the division area of interest can be templated so that when actual conditions (events there) reach a predetermined threshold—number of emitters, tanks, and vehicles—in a certain area, the commander will quickly know and take action. Or, he can quickly inform his brigade commanders so that they

may act. However, care must be taken to avoid being deceived by ruse or demonstration.

The division commander may use templates in two forms—doctrinal and event (or situational). A doctrinal template of a combined arms army in the attack showing frontages, depth, echelon spacing, composition and disposition, and strength of

DOCTRINAL TEMPLATE OF MOTORIZED RIFLE DIVISION IN THE BREAKTHROUGH



A motorized rifle regiment may attack with only three reinforced battalions, attaching all the tanks to the motorized rifle battalions.

subordinate elements can be prepared to scale in graphic form on acetate and displayed on a map. Doctrinal templates can be prepared for any enemy operational scheme—attack, defend, withdraw, reinforce—and for each specific capability of the enemy or course of action available to him within the constraints of terrain and weather. The figure on preceding page shows an example of such a template depicting a motorized rifle division in breakthrough. Actual deployment on the ground will be modified by terrain, weather, time, and other factors.

The event template relates the enemy disposition developed in the doctrinal

template to the effects of terrain, weather, time, and a specific avenue of approach.

An event template is a model of enemy activity related to time. An enemy force preparing for a course of action usually does certain things, normally in sequence or concurrently. As an example, the enemy normally conducts reconnaissance and moves to assembly areas before an attack. He pre-positions supplies, POL, and ammunition. He also moves command posts and displaces his artillery forward. These events are indicators of his intentions; they can be related to time and to a possible course of action.

EVENT INDICATORS

(ENEMY EVENTS IN REVERSE ORDER)

INDICATORS	TIME*
1. Artillery Well Forward and Massed (Abnormally Increased Transport) (LOG)	H-4
2. Movement of Maneuver Forces in Pre-Assault Formations—Compact Columns—Along Converging Axis for Concentration at Point of Breakthrough (From Assembly Areas 15-20 kms Rear of FEBA)	H-3
3. Increased Communications	H-3
4. Air Defense Units Deployed Well Forward in Pre-Assault Formations. .	H-3
5. Engineer Operations—Clearing Routes of Advance and Stabilizing Flank Security through Emplacement of Mines and Obstacles	H-2
6. Intense Artillery Preparations	H-1
7. Maneuver Force Deployment into Final Attack Formation	H-1
8. Increased Communication	H-1
9. Assault—Simultaneously with Lifting of Artillery Preparatory Fires	H-hour
10. Deployment of Airmobile Forces to Block Advancing Reserves	H-hour

*Timing does not necessarily reflect Threat doctrine.

Overlays can be prepared identifying critical terrain locations that can serve as windows through which the commander may view enemy activities. When enemy activity coincides with a series of events expected for a particular template, the commander is alerted. Intelligence requirements are refined, and collection is focused with more precision on certain areas at specific times.

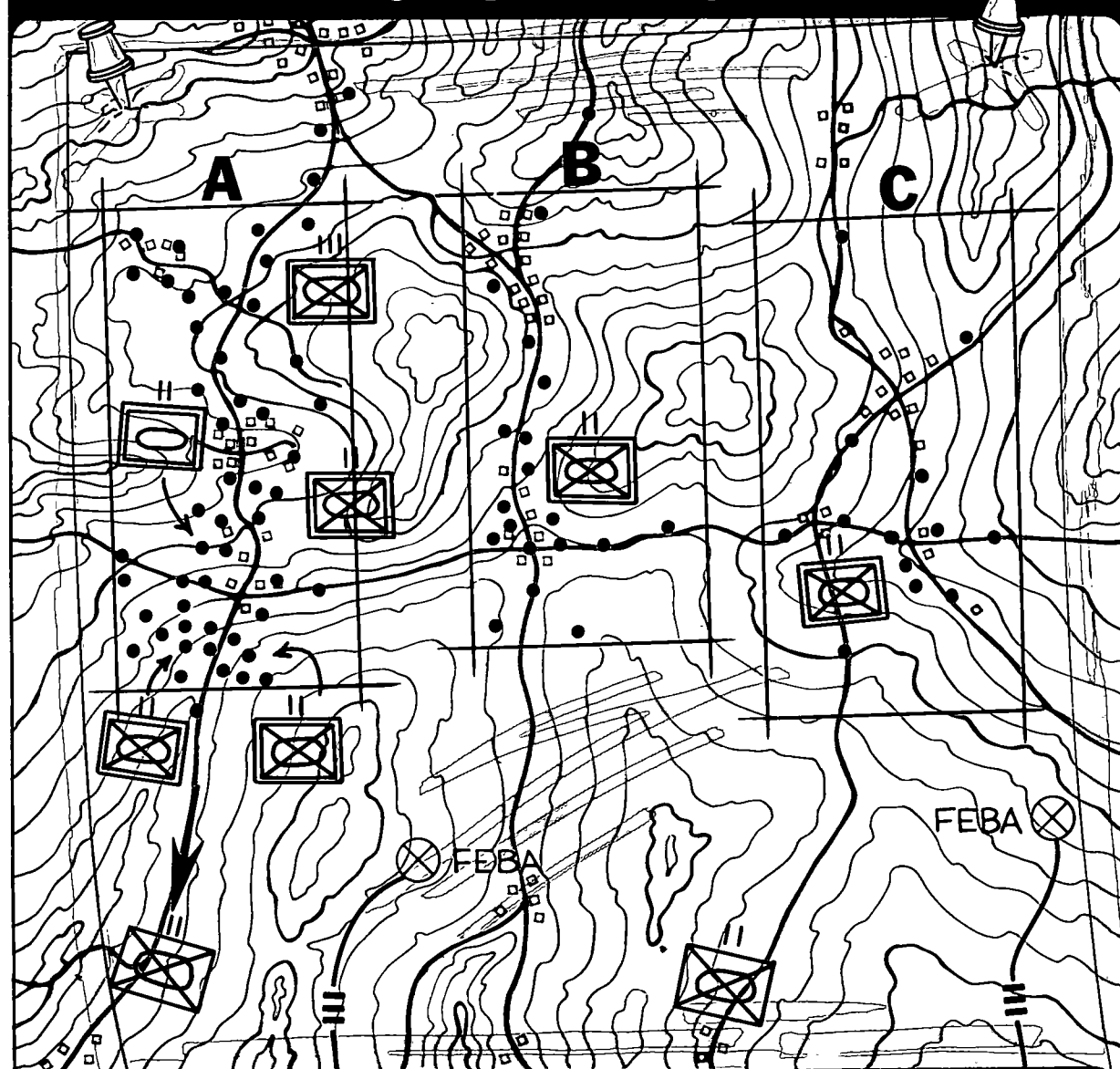
The following example illustrates how doctrinal and event templates help focus the commander's attention and resources on determining what to expect from the enemy.

Doctrinal templates applied to the terrain indicate that about five battalions can be positioned to attack through either avenue of approach.

Thus, by properly directing information-gathering operations, the commander can gain the perishable information he needs to make decisions. The commander can orient the efforts of his collection agencies by using templates. They can provide him with continuous surveillance of enemy activities and key locales which will indicate enemy intentions—where, when, and how he will attack, defend, or take some other course of action.

Electronic means continuously monitor enemy command and control nets, search for radars, and monitor logistics activity to identify and locate major weapon systems and troop concentrations. When they are identified and located, the commander can begin to assess enemy intentions. Imagery can locate tank and artillery buildup. Imagery from overhead platforms can search deeply into the enemy area of operations to look for succeeding echelons of enemy forces. Prisoners of war, refugees, and other human sources can also provide information about enemy intentions.

EVENT TEMPLATE DEPICTING ENEMY ACTIVITY



Reports have identified movement of several major enemy units.

The commander identified three windows at A, B and C; he then directed his G2 to concentrate the collection effort on those areas. If the enemy is prepared for an attack, reconnaissance elements, traffic

regulating points, and other indicators should be detected in the windows. Collection activities are intensified and requirements are precisely defined. As enemy units are detected, event templates help indicate where the main attack will most probably occur.

Defending divisions fight first-echelon regiments of the first-echelon divisions, and the second-echelon regiments of those divisions as they close to join the fight. Therefore, it is important for brigade and division commanders to know where those second-echelon regiments are and what they are doing. This is so the brigade and division commanders can move battalions to engage second-echelon regiments as they enter the fight. During the offense, it is necessary for those same commanders to know where second-echelon enemy regiments are and how they are disposed to fight. Thus, battalions can be applied to the fight in the best way to destroy the integrity of enemy first-echelon division defenses and be prepared to fight second-echelon divisions as well.

The divisional combat electronic warfare intelligence battalion is organized to analyze and produce intelligence, interrogate prisoners of war, and interpret imagery. The G2 and G3 work together to provide for operations security (OPSEC), although the latter has staff responsibility for OPSEC. Operations to neutralize enemy intelligence are the staff responsibility of the G2. The G2 also assesses friendly vulnerabilities, and the G3 plans to deceive, defeat, or confuse the enemy and enhance friendly survivability. The combat electronic warfare and intelligence battalion also provides:

- Electronic warfare support measures (ESM). ESM collect information through search, intercept, identification, and location of enemy electronic emitters.

- Electronic countermeasures (ECM). ECM are used to suppress enemy communications, electronic surveillance, weapon systems, and target-acquisition devices (jamming). Electronic countermeasures can also be used to deceive the enemy so that he reacts to the division's best advantage.

These measures and electronic counter-countermeasures (ECCM) taken to insure effective friendly use of radiated electromagnetic energy are described as electronic warfare operations. Although ECM are used to attack enemy emitters, ECM and ECCM are described together here because of their interrelationship.

The division commander's guidance establishes target priorities for electronic warfare based on the threat to the division or on vulnerabilities of enemy emitters. Enemy regimental command and control nets are particularly important and should be suppressed or exploited.

The intelligence value derived from an enemy emitter versus the tactical value of denying the enemy use of the emitter must be carefully considered. The commander may reserve the decision to attack or exploit electronic emitters which have intelligence value. Other emitters that have no intelligence value may be routinely attacked by fire or suppressed by jamming. The G2 should determine the risks and benefits of employing electronic countermeasures against certain targets, and should so inform the commander.

Jamming must complement the operation. The G3 is responsible for integrating electronic countermeasures with maneuver. The communications-electronics officer (who is the signal battalion commander), the G3, and the G2 work together to avoid or minimize interference with friendly emitters.

Jamming can only be effective for short periods of time because the enemy will take evasive action or use countermeasures. Thus, the best way to suppress an enemy emitter interfering with friendly operations is to destroy it by fire.

It is to be expected that the enemy will use electronic means to locate friendly

emitters. ECCM must be used to protect divisional electronic surveillance and target-acquisition equipment from enemy interception, deception, jamming, and destruction.

If the enemy system is located and is beyond the division's capability to monitor or suppress, assistance can be obtained from corps electronic warfare units.

ORGANIZATION FOR COMBAT

Divisions are organized to destroy the enemy. To do this, the division has a variety of weapon systems—tanks, antitank weapons, field and air defense artillery, and attack helicopters. Close air support is provided by the US Air Force.

The division must close with the enemy in order to destroy him. To close with the enemy requires suppression of his direct and indirect fire weapons, his target acquisition, and his electronic warfare systems. In order to move, to suppress the enemy, and to destroy the enemy, the division must work together as a combined arms team.

Tables of organization and equipment (TOE) detail manpower and equipment requirements for divisional units. However, all Army units are organized under modified tables of organization and equipment (MTOE). In order to determine manpower and equipment authorizations for a specific unit, it is necessary to refer to the authorization document (MTOE) for that unit. Therefore, the following pages describe organization and equipment in general terms, relying on the reader to apply principles to the specific situation in which he finds himself.

Infantry, Tank, and Mechanized Battalions

Infantry is best used to destroy enemy infantry and to ambush enemy tanks in places where freedom of maneuver is restricted by terrain. Infantry also protects tanks at night, under other conditions of limited visibility, and in areas of restricted mobility. Tanks and antitank weapons are best used to canalize and destroy enemy tanks and other armored vehicles. Mortars are used to suppress and destroy enemy gunners with high explosive rounds and to

obscure the enemy's view of the battle with smoke.

A variety of weapons are found in infantry, mechanized, and tank battalions. In infantry and mechanized battalions, infantrymen are armed with rifles; machineguns; light, medium, and heavy antitank weapons; mortars; and shoulder-fired air defense weapons. The tank battalion is organized with main battle tanks, mortars, and shoulder-fired air defense weapons.

Effective Use of Fighting Elements

Rifle units operate at times and places where fields of fire are relatively short.

Antiarmor systems are located where fields of fire allow use at maximum ranges.

Tanks are most effective where they can move rapidly and fields of fire are relatively long.

Heavy antitank weapons are most effective at long ranges. They are used to deliver long-range, highly lethal point fire against armored vehicles and sometimes against field fortifications.

Combat battalions are grouped by the division commander to fight under brigade

MAJOR WEAPON SYSTEMS OF THE INFANTRY DIVISION

	<i>Infantry Battalion (8)</i>	<i>Mechanized Battalion (1)</i>	<i>Tank Battalion (1)</i>	<i>Air Cavalry Squadron</i>	<i>Light Field Artillery Bn (3)</i>	<i>Composite Field Artillery Bn</i>	<i>Air Defense Artillery Bn</i>	<i>Engineer Battalion</i>	<i>Combat Aviation Battalion</i>	<i>Total</i>
Tow	18	12		6						162
Dragon	27	27		6						249
Tank, M60A1			54							54
Armored Reconnaissance Airborne Assault Vehicle M551				9						9
Attack Helicopter				27				21		48
105mm Howitzer, M102					18					54
155mm Howitzer, M114						18				18
8 inch Howitzer, M110						4				4
Vulcan							24			24
Combat Engineer Vehicle								3		3
Chaparral							24			24

headquarters. The brigade commander organizes for combat by grouping companies under battalion headquarters. This organization is called a battalion task force. Infantry battalion operations are described

in FM 7-20, *The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger)*; and tank and mechanized battalion task force operations are described in FM 71-2, *The Tank and Mechanized Battalion Task Force*.

— The Air Cavalry Squadron —

Cavalry is a combat maneuver force of combined arms mounted in aerial and ground vehicles, uniquely organized and equipped for its mission. It is trained to find the enemy in order to prevent the friendly main body from being engaged under adverse circumstances and, within its capability, to provide security for the main body. Cavalry organization and employment exemplify two requisites for battle:

- The need to find the enemy and develop the situation with the least force possible.

- The need to provide reaction time and maneuver space with a force tailored to leave the bulk of combat power in the main body available for employment at the time and place of decision.

The air cavalry squadron is organized with three air cavalry troops and an armored cavalry troop. The squadron often conducts offensive, defensive, and delay operations. It is particularly suited for economy of force missions. Cavalry operations are described in FM 17-95, *Cavalry*.

— Attack Helicopter Units —

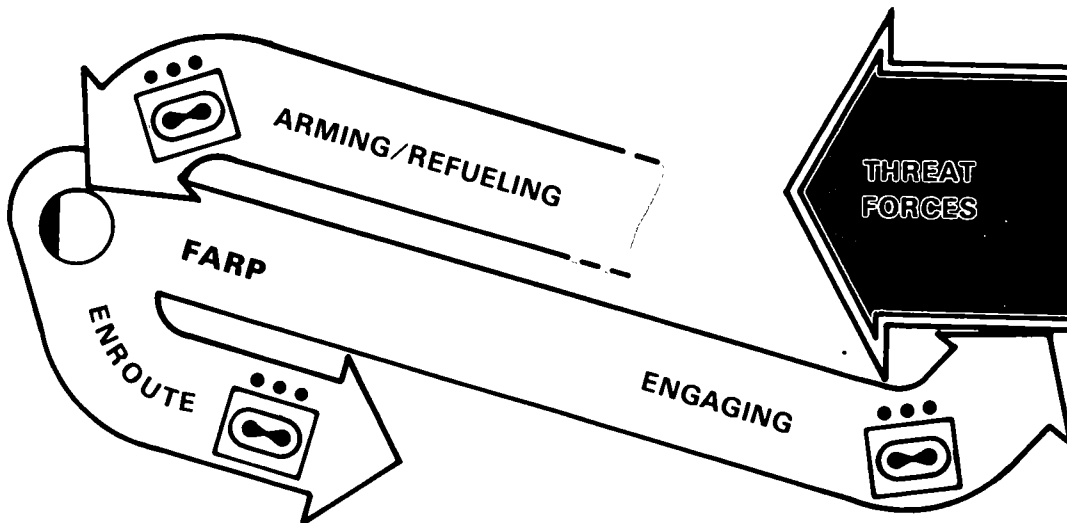
Attack helicopter companies are air maneuver units. They employ highly mobile, responsive aerial combat vehicles that operate as part of the combined arms team. They can destroy tanks and other armored vehicles with heavy antitank weapons; they can destroy dismounted infantry and attack area targets with rockets. Attack helicopter units live in the ground environment. They maneuver like ground units to engage the enemy from the front, flanks, and rear.

Because of their heavy requirements for fuel and ordnance, attack helicopter companies should not be attached to brigades. They are, however, often placed under operational control of brigades. When it is

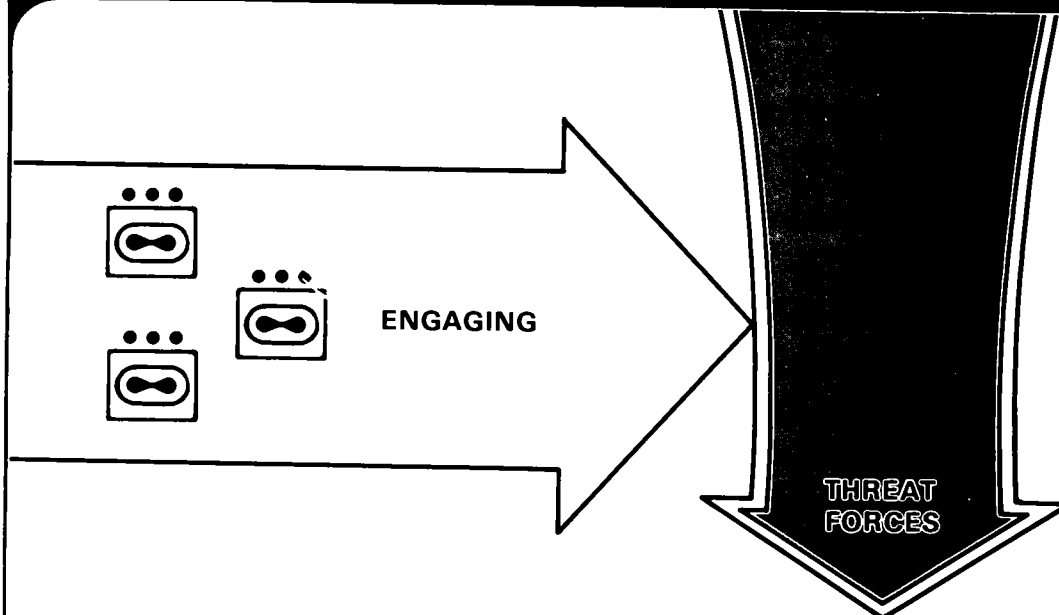
necessary to attach an attack helicopter company to a brigade, combat service support must be provided.

Normally, attack helicopter companies should not be parcelled out by platoon. An attack helicopter company normally fights by applying continuous pressure, with one platoon engaging, one platoon arming and refueling, and one platoon enroute to or from a forward arming and refueling point (FARP). A second, though less frequently used, method of employment is one in which an entire company might be employed in the same area, at the same time, against the same target. How attack helicopter units fight is described in FM 17-50, *Attack Helicopter Operations*.

PLATOON ROTATION ATTACK



ENTIRE COMPANY ATTACK



Field Artillery

Field artillery is the division commander's principal and most responsive indirect fire weapon system. Division field artillery is organized with three light howitzer battalions and one composite medium and heavy howitzer battalion. One or more field artillery brigades may be attached to or placed in support of the division by the corps.

Field artillery can deliver a variety of munitions. It is most often used to suppress or neutralize enemy direct and indirect fire weapon systems with a combination of high explosives and improved conventional munitions; smoke munitions are used to obscure the enemy view of divisional units. Field artillery is also used to neutralize or render ineffective enemy command and control installations or facilities, and logistics and assembly areas. In the near

future, field artillery will be able to lay down minefields with scatterable mine munitions and to destroy armored vehicles with precision-guided munitions.

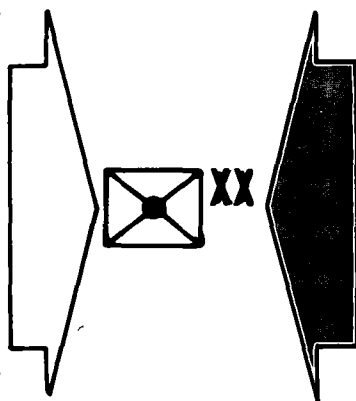
Division field artillery can acquire targets from several sources (figure below). It has a target-acquisition battery that acquires targets by radar and sound and flash ranging. Field artillery fire support teams (FISTs) operating with company teams acquire targets and adjust fires in support of maneuver. Aerial observers assigned to the division artillery headquarters battery are used either in general support or in direct support of committed units.

Field artillery is organized for combat by assigning standard missions to its units. Normally, one light field artillery battalion is placed in direct support of each com-

TARGET ACQUISITION SOURCES

FIELD ARTILLERY

- TARGET ACQUISITION BATTERY
- FIRE SUPPORT TEAMS (FISTs)
- GROUND AND AERIAL OBSERVERS



OTHER

- SIGNAL INTELLIGENCE
- GROUND SURVEILLANCE RADAR
- REMOTE SENSORS
- PHOTOGRAPHY
- INFRARED
- SIDE LOOKING AIRBORNE RADAR
- RECON
- INTERROGATION
- AERIAL OBSERVATION

mitted brigade; additional field artillery units may reinforce direct support battalions, while some field artillery is usually kept in general support of the force as a whole. When organizing field artillery for combat, the following fundamentals should be kept in mind:

- In offensive operations, the main effort is provided with additional support, while in defensive operations the most vulnerable sector is given the additional support.

- Some field artillery should be kept in general support so that the division commander can concentrate fires when and where necessary.

Fire support planning is done at each echelon in the division by fire support elements operating with maneuver battalions, brigades, and in the division tactical and main command posts. Fire support planning may be formal or informal. Formal planning usually results in a written fire support plan.

Prior to an attack, a preparation may be fired. Preparatory fires are usually delivered in a prearranged sequence to degrade enemy defenses prior to the arrival of attacking forces. The decision to fire a preparation is normally made by the division commander.

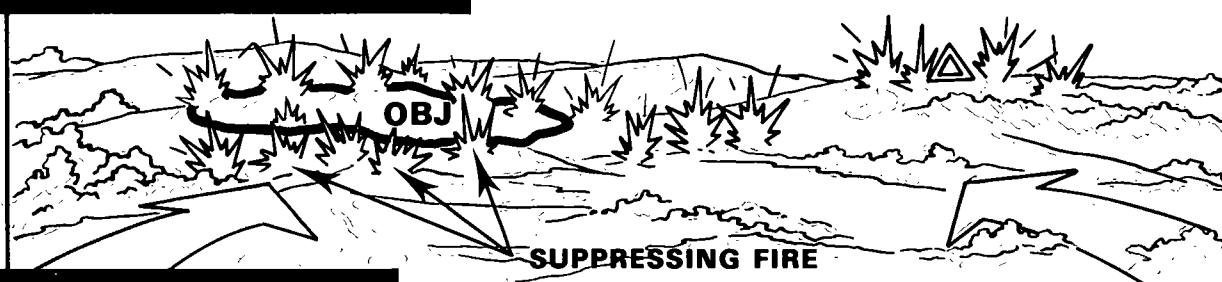
During an attack, fires are planned short of the objective to suppress enemy gunners and deny the enemy the ability to interfere with maneuver. Fires are also planned on the objective to suppress the enemy and to support assaulting forces, and beyond and to the flank of the objective to protect the force while it prepares to continue operations.

In the defense, fires are planned on likely avenues of approach. A counterpreparation may be fired to offset the

PRIOR TO ATTACK



DURING AN ATTACK



IN THE DEFENSE



potential effect of the enemy preparation, break up the momentum of his attack, and destroy his command control. It is fired on order of the division commander.

A planned counterfire program is normally prepared for both offensive and defensive operations. Counterfire is also fired on targets of opportunity.

The division commander's fire support coordinator is the division artillery commander. He coordinates delivery of field artillery fires through the division artillery tactical operations center and field artillery battalion fire direction centers, and coordinates other fire support through FSEs. A

fully automated tactical fire direction system (TACFIRE) will soon link together battalion fire direction centers, the division artillery tactical operations center, and fire support elements. This system will provide for more rapid response to the division's fire support requirements.

The corps prepares plans for employment of nuclear packages. The division often will be required to plan sub-packages for the corps. In a similar fashion, chemical fires are planned for when it is appropriate to do so. Nuclear and chemical fire planning is fully described in FM 6-20, *Fire Support in Combined Arms Operations*.

Tactical Air Support

The USAF conducts the following tactical air operations in support of the division:

- Counterair operations are directed against the enemy's air capability in order to attain air superiority over the battlefield.
- Tactical airlift operations provide the air movement of forces and supplies within a theater.
- Tactical air reconnaissance, air interdiction, and close air support operations conducted in direct support of land forces are known as *offensive air support* (OAS) operations. Close air support is always in direct support of land forces. However, there may be tactical air reconnaissance and air interdiction missions flown which are not in direct support of land forces and therefore are not a part of offensive air support operations.

Tactical air reconnaissance operations, when conducted in support of ground operations, are directed toward satisfying the information requirements of the division. They are conducted to provide timely information on the disposition, composition, location, activities, movements, installations, lines of communication, and electronic and communication emissions of the enemy. All information acquired by tactical air reconnaissance should ideally be interpreted, evaluated, and transmitted in near real time. Effective use of near real-time target information permits timely response with appropriate forces. Tactical air reconnaissance operations also provide poststrike coverage as well as meteorological, hydrographic, and geographic data of a particular area.

Air interdiction is conducted to destroy, isolate, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces, at such a distance from friendly forces that detailed integration of each air mission with the fire and maneuver of friendly forces is not required.

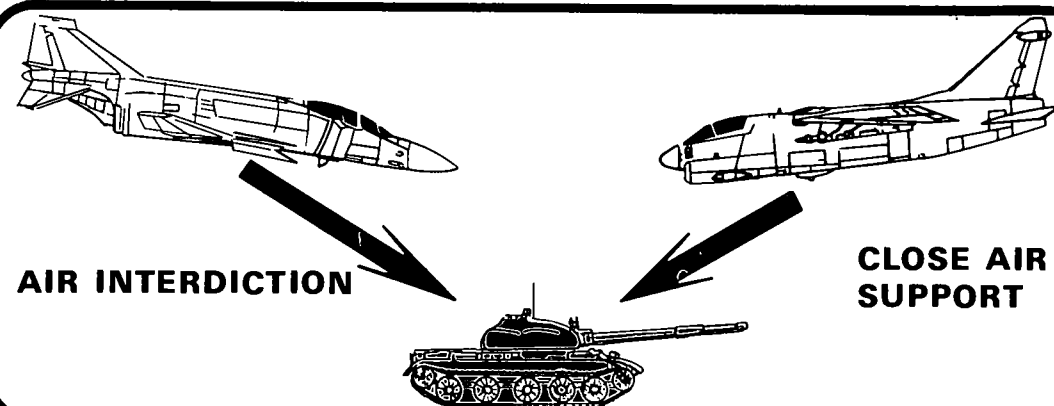
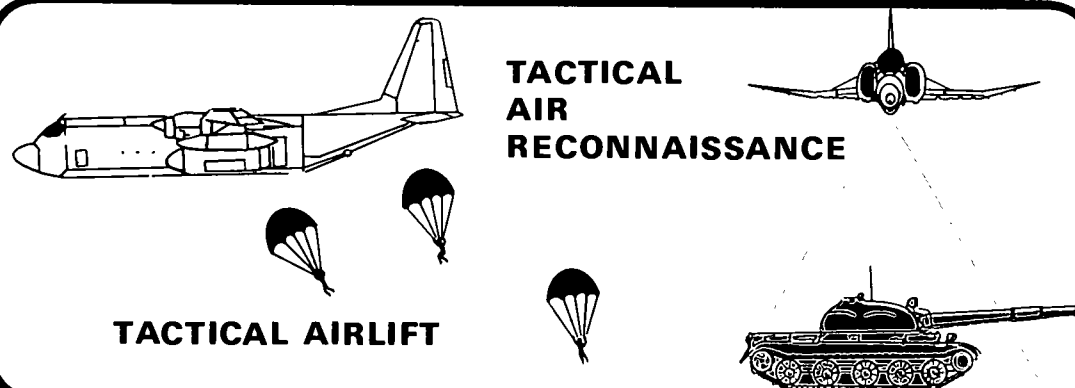
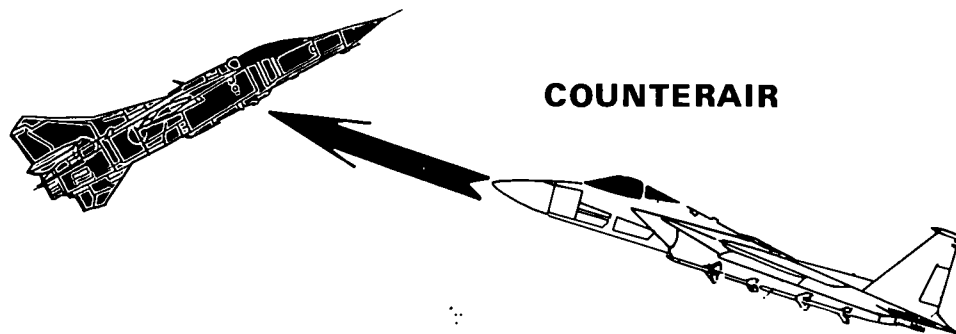
Air interdiction missions are part of offensive air support only when flown against specific targets which may have a direct bearing or influence on operations of land forces. This category of air interdiction is flown in the battlefield area and can have a direct effect on the enemy's ability to continue operations. It is referred to as battlefield air interdiction. Battlefield air interdiction requires joint planning and coordination between air and land forces.

Close air support (CAS) is air action against targets which are in close proximity to division forces and which require detailed integration of each air mission with the fire and maneuver of these forces. The application of CAS sorties enables the commander to concentrate firepower rapidly at a decisive point.

In order to facilitate joint planning for the use of air, at least two control lines are required:

- **Forward Line of Own Troops (FLOT).** The FLOT is a line which indicates the most forward positions of friendly ground forces at a specific time.
- **Fire Support Coordination Line (FSCL).** A line established by the appropriate ground commander to insure coordination of fires short of the FSCL which are not under his control but which may

TACTICAL AIR SUPPORT OPERATIONS

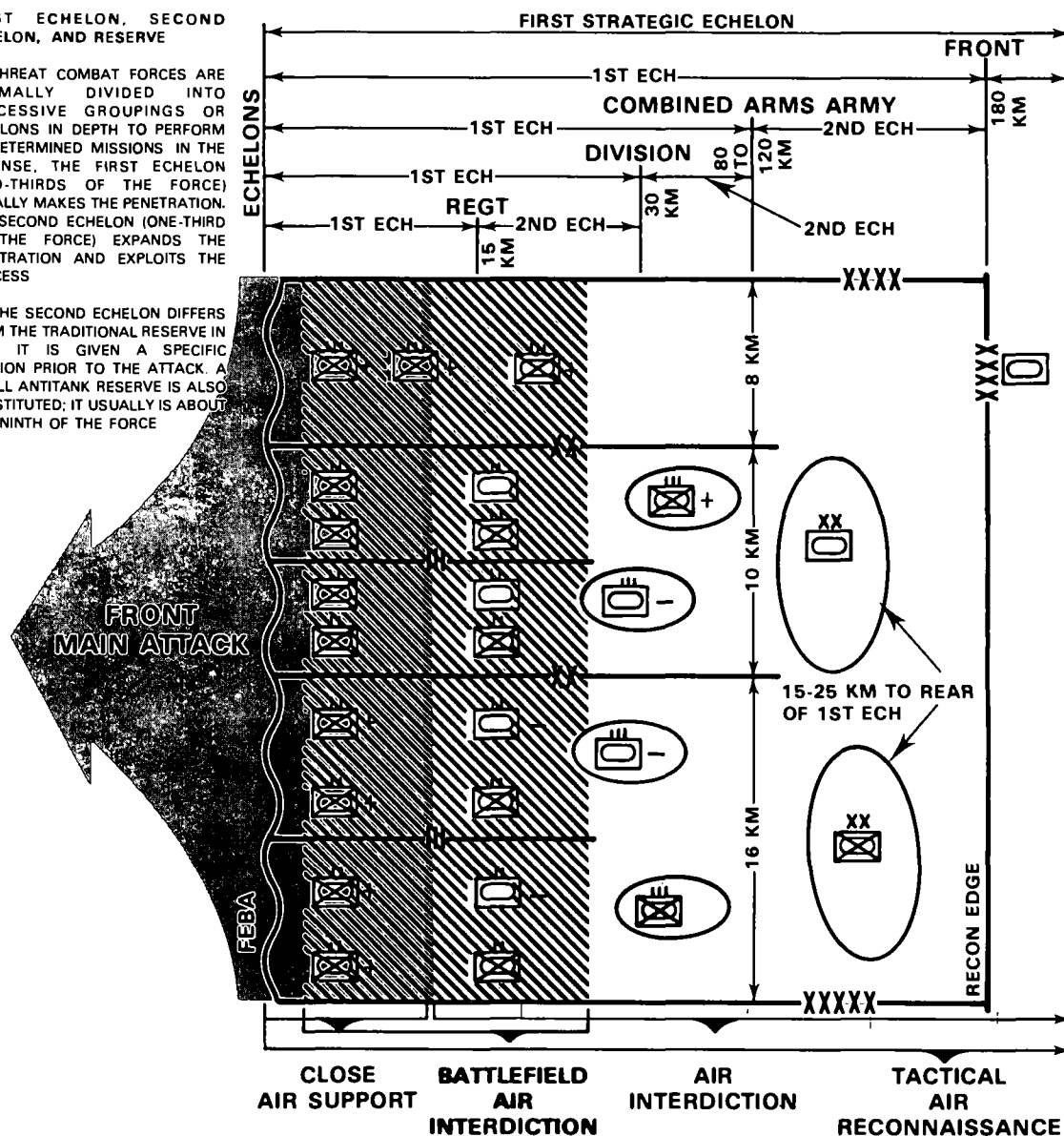


APPLICATION OF ALLIED AIR POWER VS. THREAT OFFENSIVE OPERATIONS

FIRST ECHELON, SECOND ECHELON, AND RESERVE

THREAT COMBAT FORCES ARE NORMALLY DIVIDED INTO SUCCESSIVE GROUPINGS OR ECHELONS IN DEPTH TO PERFORM PREDETERMINED MISSIONS IN THE OFFENSE. THE FIRST ECHELON (TWO-THIRDS OF THE FORCE) USUALLY MAKES THE PENETRATION. THE SECOND ECHELON (ONE-THIRD OF THE FORCE) EXPANDS THE PENETRATION AND EXPLOITS THE SUCCESS

THE SECOND ECHELON DIFFERS FROM THE TRADITIONAL RESERVE IN THAT IT IS GIVEN A SPECIFIC MISSION PRIOR TO THE ATTACK. A SMALL ANTITANK RESERVE IS ALSO CONSTITUTED; IT USUALLY IS ABOUT ONE-NINTH OF THE FORCE



The basic differences between close air support and battlefield air interdiction operations lie in the immediacy of the enemy threat to the fire, movement, and security of friendly forces, and on how far the enemy threat is from the friendly forces. Battlefield air interdiction operations are conducted against targets that are a less immediate threat and not in the proximity of friendly forces. Although battlefield air interdiction operations may not require detailed integration of each air mission with the fire and movement of the division, continuous coordination is essential to the success of specific land operations.

The *Air-Ground Operations System (AGOS)* provides the division commander with the organization and means to process, evaluate, and coordinate requests for offensive air support and tactical airlift, and for rapid and continuous exchange of combat information and intelligence with the Air Force Command. The Air-Ground Operations System extends through all Army echelons down to maneuver battalion. Through this system, the division commander integrates surface fires with the fires of supporting tactical aircraft, and coordinates the reconnaissance and surveillance efforts of Army aviation with supporting tactical Air Force elements. The system is operated by staff personnel who have received specific training in air-ground operations. The G3 is responsible for general staff supervision of all air-ground operations except combat service support airlift and reconnaissance and surveillance. Combat service support airlift is the responsibility of the G4. Air reconnaissance and surveillance is the responsibility of the G2.

The division commander relies primarily on the tactical air control parties (TACPs) to assist in planning and coordinating his requirements for tactical air

support. The TACP consists of experienced tactical pilots; radio operators-maintainers and drivers; airborne and ground vehicles; and the communications equipment required to obtain, coordinate, and control tactical air support for ground forces. TACPs are located at division, brigade, and battalion levels. At the battalion and brigade level, the TACPs are located with the maneuver unit's fire support element (FSE) and operations center or command post during all tactical operations. Forward air controllers (FACs) are qualified tactical fighter pilots assigned to battalion-level TACPs. One FAC performs air liaison officer (ALO) functions with the battalion-level operations center or command post.

Their primary mission is control of close air support missions and integration of air support with the fire and maneuver of the division. These functions are performed from either ground or airborne positions to monitor and direct air attacks against designated targets. Additional tasks of an airborne FAC include visual reconnaissance, convoy escort of surface or airborne vehicles, air-ground adjustment of artillery, antimortar surveillance, and establishment of an air-ground communications relay.

See FM 100-26, *The Army Air-Ground Operations System*, for further details concerning the Air-Ground Operations System.

Close air support must be integrated with the fires of tanks, artillery, mortars, ATGMs, and attack helicopters available to the division commander. For CAS to be effective, special procedures are required. One such procedure incorporates planned fires on predesignated target zones (PTZs). The PTZ identifies approaches into and exits from these target zones, designates attack profiles, and lists the initial, release, and pop-up reference points.

Predesignated target zones are preplanned; in defense, they are generally near battle positions or areas in which ground forces fight. In the offense, they are generally against enemy defensive positions, assembly areas, and along major avenues of approach. Time permitting, target folders should be prepared for each PTZ and be available to each TAC fighter wing and reconnaissance wing, to airborne and ground FACs, and to maneuver unit commanders of brigade and battalion. Target folders, prepared jointly by the Air Force and Army commanders, show low-level routes from air bases to PTZs and designated points along those routes.

The location, composition, activities, and movements of enemy forces and their arrival in PTZs are required to attack them at the proper time.

- In the offense, tactical air reconnaissance must identify, locate, and track major opposing force reserves in order to target them for attack in the PTZ. PTZs will be planned along routes which the enemy could use or in areas where he would logically establish defensive positions to counter our attack.

- In the defense, tactical air reconnaissance must ascertain as soon as possible the location and direction of the enemy's main effort. It will have to provide timely combat intelligence in order to target the enemy's first- and second-echelon forces of the first-echelon divisions as they enter PTZs.

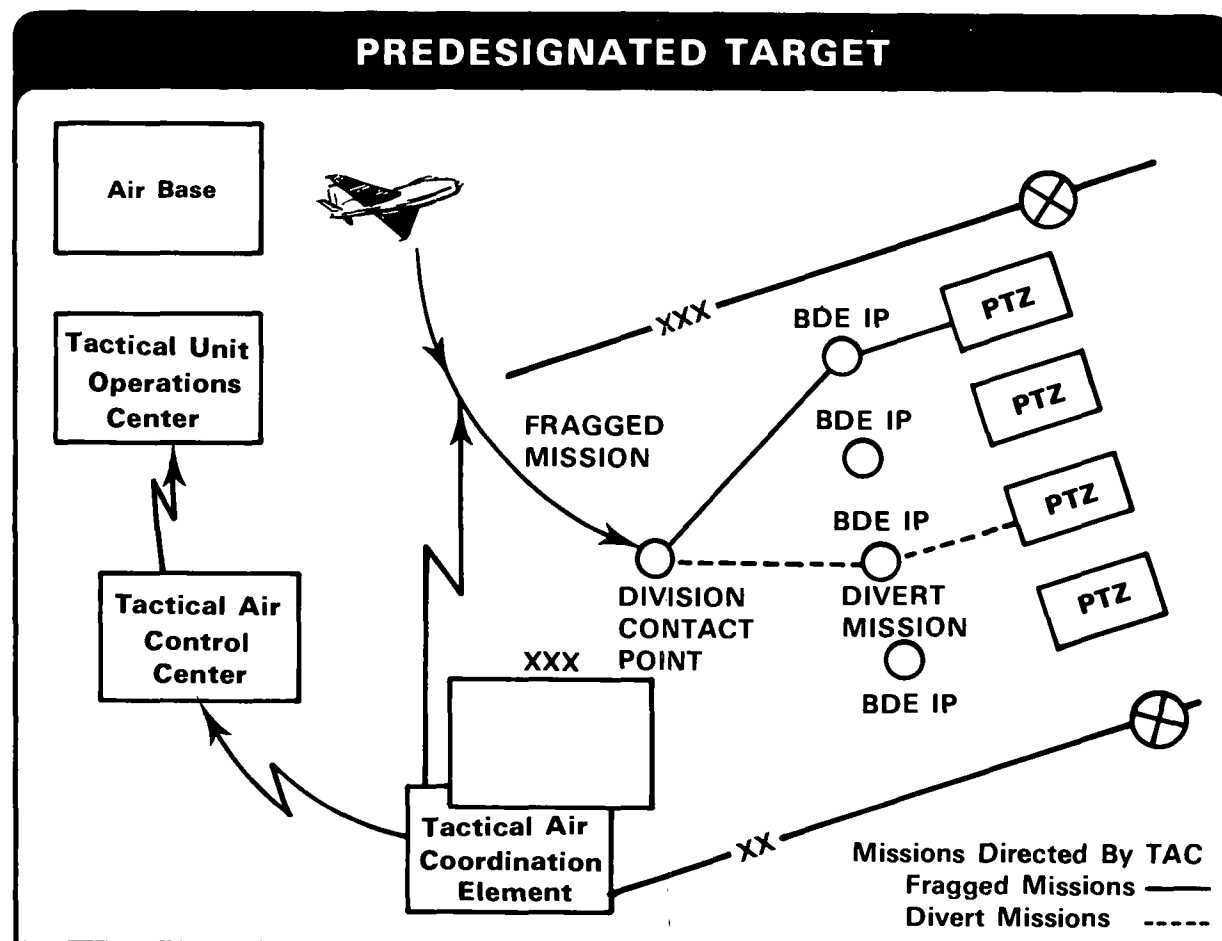
The illustration following shows an aircraft inbound to the division contact point with a predesignated target. At the division contact point, if no radio contact can be made with any of the various controlling/relay agencies, the mission would proceed to the brigade Initial Point (IP), and

then continue inbound to the PTZ where the aircrew would attempt to visually acquire the predesignated target, release ordnance, and return to base. If radio contact can be made at the division contact point, the aircrew will be given clearance to attack the predesignated target, or may be given a brigade IP for attack of a high-priority target, either preplanned or immediate CAS.

The fighter departs the division contact point to the specific brigade IP servicing the PTZ to be attacked. If communications permit, the airstrike will be conducted using normal FAC procedures. If communications

are marginal, the FAC can relay essential target information or simply give clearance to attack.

Airspace management is accomplished by the Division Airspace Management Element (DAME), which consists of air defense, field artillery, Army aviation, and Air Force representatives. The DAME coordinates the immediate requirements of airspace users with the commander's plan in order to use the division's airspace most effectively. The DAME is located in the tactical operations center of the division main command post.



Suppression of enemy air defenses (SEAD) is an essential part of all operations employing airpower. SEAD requires an integrated air/land force effort to locate and suppress enemy surface air defenses. The location and detection effort is continuous, with increased emphasis during the actual attacks on a critical portion of the enemy's air defense systems. Prior to submitting a CAS request, the benefits of the support must be weighed against the necessary SEAD effort.

When OAS operations take place close to the FLOT, suppression is achieved primarily by fires from division direct and indirect fire systems. The Threat is characterized by a high density of first-echelon units and short-range surface-to-air defense systems. Although not located near the FLOT, longer range surface-to-air missile (SAM) systems will normally be able to cover this area, and they are a threat to friendly aircraft that must climb to higher altitudes in order to deliver their ordnance.

- **Planned SEAD Fires.** Specific fire support units are designated to engage

preplanned air defense targets. These are allocated on a first-priority basis for a limited duration. Suppression fires should be routinely planned against known and suspected SA-6 and SA-8 air defense sites.

Planned targets may be scheduled (i.e., fire is delivered in accordance with a time schedule), or they may be on-call. Planned enemy air defense targets may be engaged as part of normal offensive or defensive fires such as preparations, counter-preparations, groups of targets, and series of targets, or they may be engaged as a program in support of a coordinated air-ground operation. In the latter case, artillery fires are planned and scheduled by the fire support coordinator in close coordination with the supported aerial element. Consideration is given to the type of mission to be flown, the tactics to be used by the aircraft, the locations of enemy air defense systems, suppression of the capabilities of our weapons, and the terrain and weather.

- **Immediate SEAD Fires.** Since the exact location of every enemy air defense weapon cannot be known, some suppression assets should be immediately available to the pilot or observers. Units to support this effort must be designated before the operation. First priority of fires for these predesignated units will change to immediate SEAD fires when OAS aircraft are being used in the area.

- **Targets of Opportunity.** Normal fire request channels are used for the engagement of targets of opportunity. The mobility and small size of most air defense targets make it most desirable to use observed fire techniques and engage immediately upon detection. Fire may be adjusted on these targets by forward observers, aerial observers, attack or scout helicopter pilots, and Air Force pilots either directly or through the forward air controller. Consideration should be given to having the forward observer concentrate on locating and bringing under attack the SA-9 and ZSU-23/4 air defense systems in the target vicinity just prior to the arrival of the OAS aircraft.

— Naval Gunfire Support —

Sometimes US Navy ships may be in position to support division operations. They are used essentially the same as long-range field artillery and may be employed in direct or general support. When operating in support of the division, the US Navy at-

taches an air/naval gunfire liaison company to the division. It provides liaison parties to the division command post and brigades, and shore fire control parties to maneuver battalion task forces to plan and control naval gunfire support.

Fire support operations are described in detail in **FM 6-20, Fire Support in Combined Arms Operations**, and **FM 6-20-2, Division Artillery, Field Artillery Brigade, and Field Artillery Section (Corps)**.

— Air Defense Artillery —

Divisional air defense artillery protects the division from enemy air attack and, with USAF fighter interceptors, allows the division to operate with minimum interference from enemy aircraft. The division has an air defense battalion organized with two batteries of Chaparral weapon systems and two batteries of Vulcan weapon

systems. Shoulder-fired air defense weapon (Redeye) teams are also found in infantry, mechanized, tank, and field artillery battalions and with the air cavalry squadron. The division normally operates under the umbrella of theater medium- to high-altitude (Nike-Hercules) air defense weapon systems. A corps low- to medium-altitude (Improved

Hawk) battalion is usually placed in direct support of the division. **FM 44-1, US Army Air Defense Artillery Employment**, describes air defense artillery operations.

As a general rule, sufficient air defense artillery is not available to adequately

defend all divisional units and installations. Therefore, air defense priorities are established by the division commander. The division G3 and air defense battalion commander work together to develop priorities to recommend to the division commander.

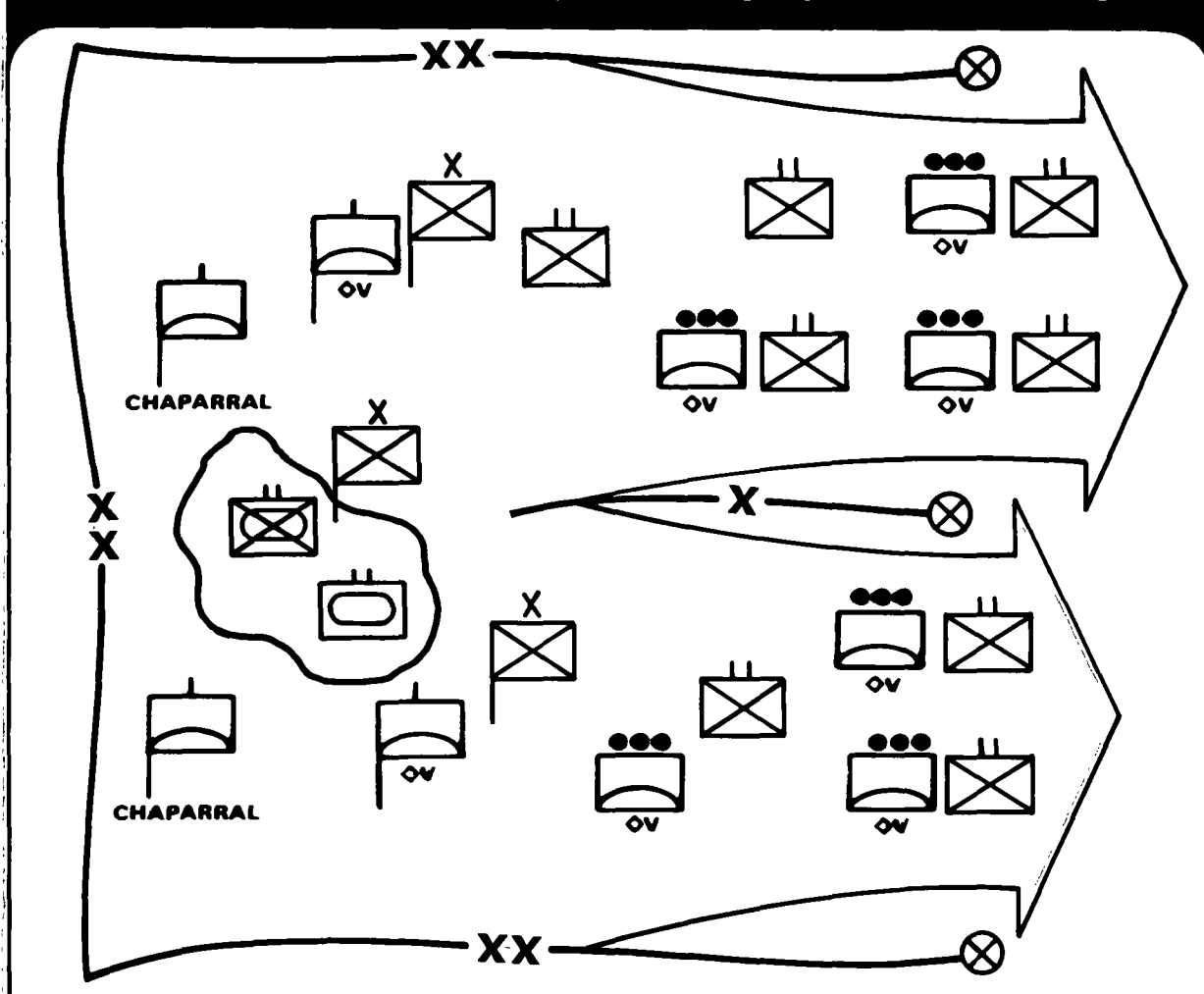
As with field artillery, air defense units are normally assigned missions of direct support, reinforcing, or general support. Vulcan batteries are often placed in support of brigades, while Chaparral batteries are

usually employed in general support, defending critical fixed installations.

In a movement to contact, Vulcan platoons may be employed with leading battalion task forces and sometimes with leading company teams.

In an attack, air defense weapons must be sited to provide maximum density of air defense over the area where the main attack is to take place.

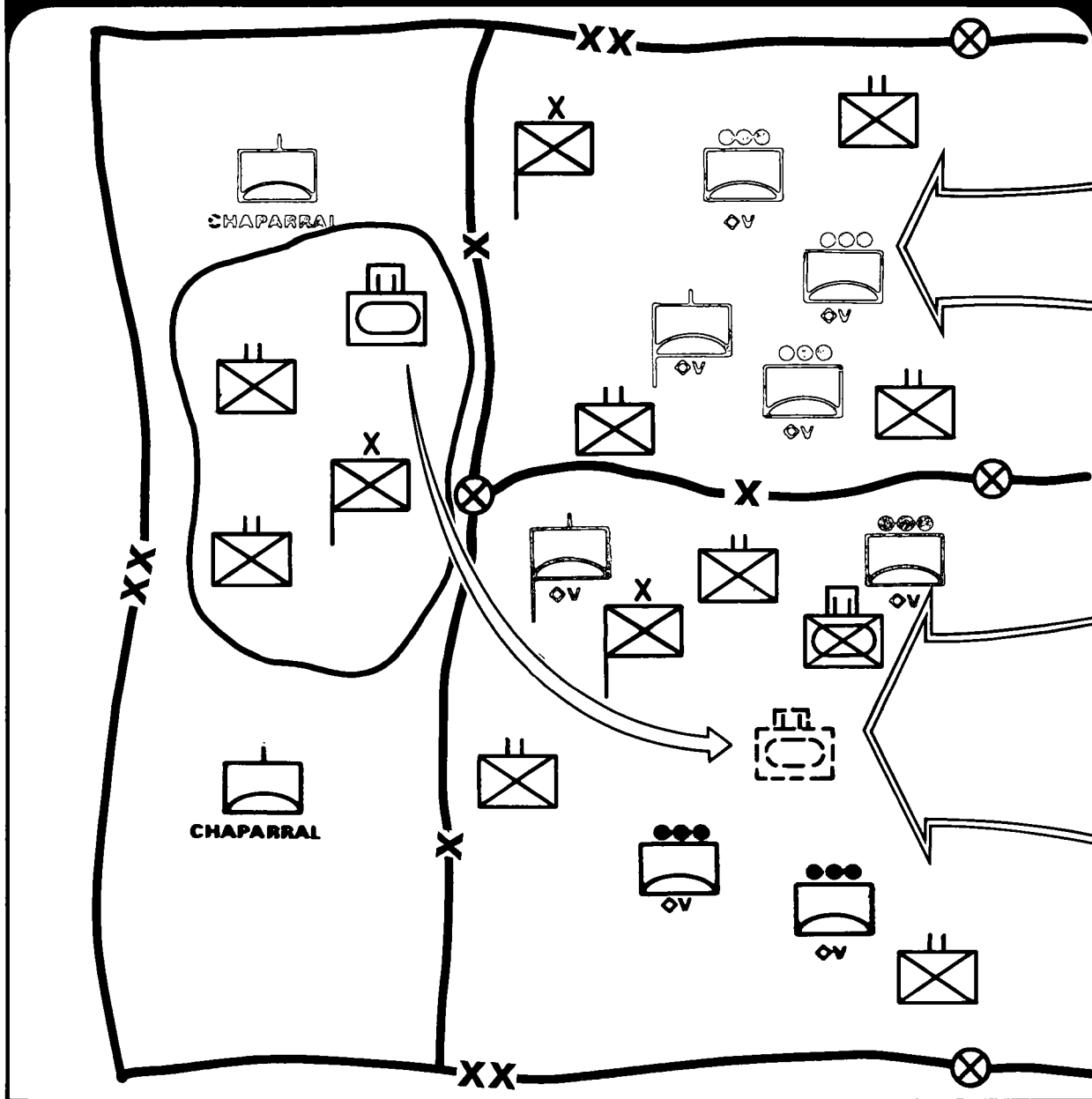
SITING OF AIR DEFENSE WEAPONS IN AN ATTACK



In the defense, once battle is joined, air defense weapons must move to concentrate maximum density of air defenses over the area where the enemy main effort is being made.

In both offensive and defensive operations, air defense for command and control and combat service support installations should be provided. To the extent

SITING OF AIR DEFENSE WEAPONS IN THE DEFENSE



possible, critical points along lines of communications—for example, bridges and sometimes intersections—should be protected. This is particularly true during delay, security force, and covering force operations. Chaparral/Vulcan operations are further described in **FM 44-3, Air Defense Artillery Employment, Chaparral/Vulcan.**

Air defense artillery fires, including fires from small arms and crew-served weapons, are controlled by air defense rules

and procedures established by the Area Air Defense Commander (AADC) and are normally provided to the division by corps.

The division commander has authority to impose more restrictive controls on air defense weapons if the situation so requires. The division commander may not reduce the level of control on his own authority without the approval of the AADC. The air defense battalion commander is the division air defense officer and serves as the point of contact for all air defense forces supporting the division.

Engineers

The divisional engineer battalion is organized with a headquarters company, three engineer companies, and a bridge company. Engineers remove and emplace mines and obstacles, build or repair roads, emplace bridges, and help tank and mechanized battalion task forces and field and air defense artillery battalions construct fighting positions. Engineers sometimes fight as infantry, but not routinely. Their employment as infantry is more probable in defensive operations than in offensive operations.

A divisional engineer company is usually placed in direct support of each brigade. The bridge company has an armored vehicle launched bridge (AVLB) platoon. AVLBs are used to span short gaps less than 18 meters wide. For river crossing operations, the bridge company also has a rafting platoon equipped with either mobile assault bridges or float bridges. There is insufficient divisional bridging to support large-scale river crossing operations; thus, when these operations are necessary, additional bridging is required from corps engineer units. **FM 90-13, River Crossing**

Operations, further describes these operations.

Divisional engineers operate forward with fighting units. Engineer platoons operate with battalions and task forces. This is particularly true in an advance to contact during a deliberate attack against fortified positions, or when preparing for defensive operations.

The division commander establishes engineer work priorities. The G3 and division engineer battalion commander work together to develop work priority recommendations for the commander to consider. In offensive operations, obstacle reduction, bridging, and maintenance of supply routes are most important. In defensive operations, obstacle construction, minefield emplacement, and fighting position construction are most important. During defensive operations, maintenance of supply routes must also be accomplished. **FM 90-7, Obstacles,** describes in detail obstacle reduction and construction. Other engineer operations are described in **FM 5-100, Engineer Combat Operations.**

Combat Service Support

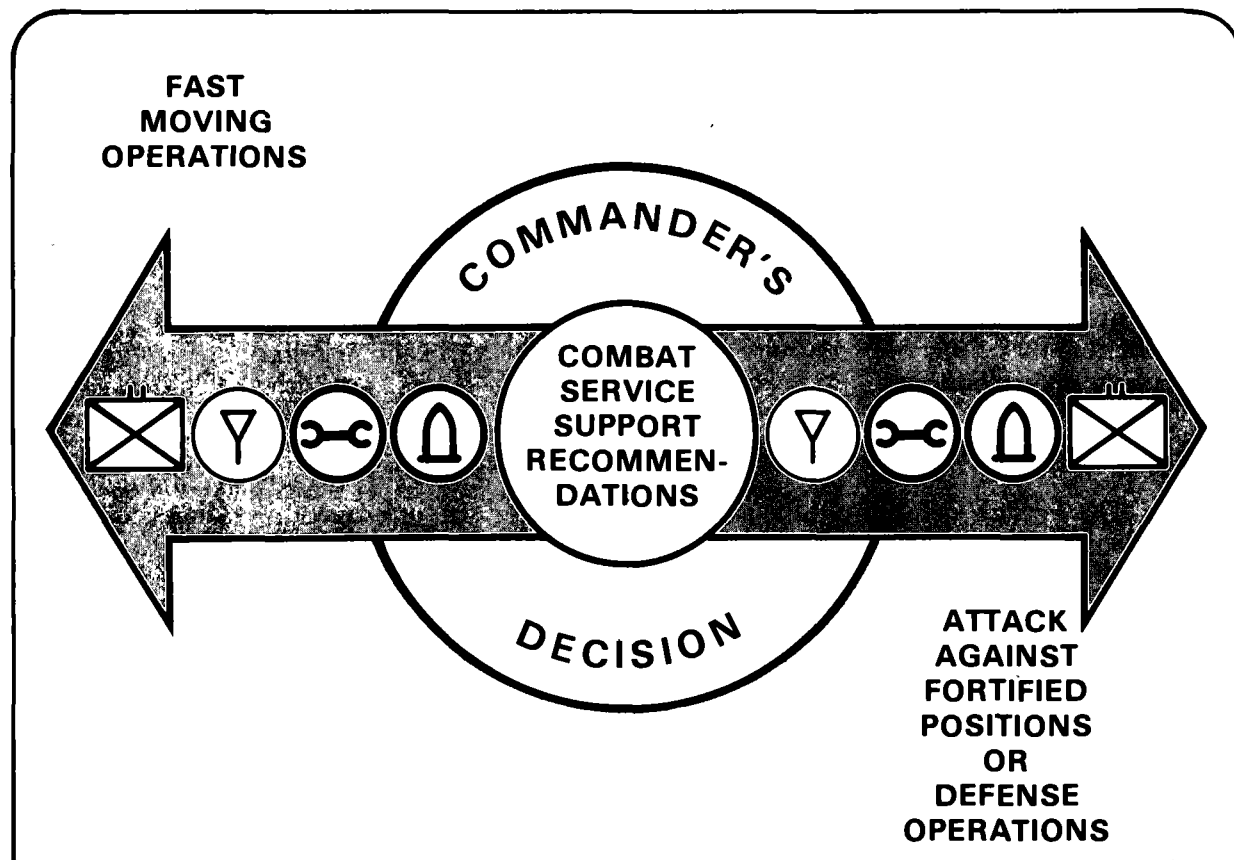
The division support command (DISCOM) provides personnel replacements, fuel, ammunition, and maintenance; replaces crews and equipment lost in battle; and treats and evacuates wounded.

The division commander establishes priorities for combat service support. The G1, G4, and DISCOM commander work together to provide combat service support recommendations to the division commander.

Much of the division support command operates in brigade support areas since brigades have no combat service support units of their own. Division support

command units most often found in the brigade support area are a forward support maintenance company, a forward supply section from the supply and transport battalion, a medical company, and maintenance support teams.

Division support command operations in the brigade support area are controlled by a forward area support coordinator (FASCO). He works with the brigade executive officer and S4 to see that the needs of the brigade are met. Combat service support operations are described in detail in chapter 6, Combat Service Support Operations.



COMMAND POST OPERATIONS

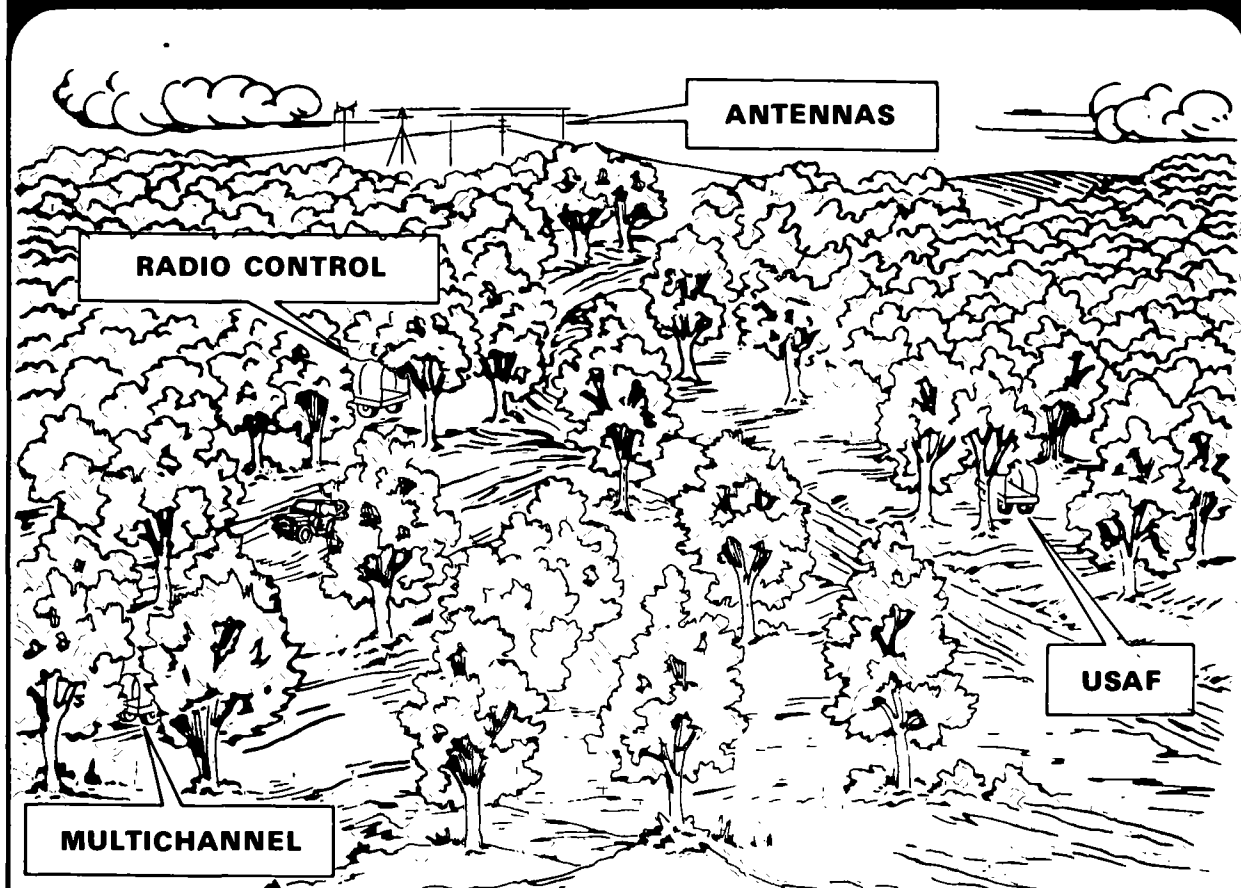
Division Tactical Command Post

Commanders generally organize command posts to suit themselves. The tactical command post should be very small. Its size and electronic signature should be no larger than that of a brigade command post. Ideally it would look more like a battalion headquarters. It is generally organized with the G3, a USAF air liaison officer, and the division artillery commander or his assistant fire support coordinator. From time to time, the G2 or his assistant, the G4 or his assistant, and the air defense artillery battalion commander

may also operate from the tactical command post. Staff officers operating from the tactical command post should bring with them only the minimum number of helpers necessary for the support of the commander in the forward area.

There will always be a tendency to expand the functions as well as the size of any command post. This is particularly so in the case of the tactical command post since the commander normally takes his station there. Therefore, it is necessary to

DIVISION TACTICAL COMMAND POST CONFIGURATION COVERED AND CONCEALED FROM THE AIR



guard against expansion lest the command post become cumbersome, less mobile, and more identifiable by enemy information-gathering agencies.

The tactical command post site is normally located in an area near the point of decision and is selected by the commander or his G3 with advice from the signal battalion commander. The location should provide for good communication with brigade command posts; the division main command post; the division materiel management center; the corps tactical command post; and, if possible, leading battalion task forces. But the tactical CP itself should not be located atop the highest hill just so communication will work well. It should be located near routes to the division main command post and the brigade command posts. Care should be taken not to site it near prominent landmarks which could identify the location.

It is best to locate command post operational vehicles in buildings near the

edge of a built-up area for good cover and concealment. Essential communication equipment must be located some distance away with remote links to operational vehicles. These remote connections should be wire/cable to the maximum extent possible in order to help reduce the emission signature of the tactical CP.

Two dedicated FM secure voice nets provide the primary communication link between the tactical command post and brigade command posts. Communication support for the tactical command post is provided by an element from the divisional signal battalion command operations company. Division communication nets are described later in this chapter.

As the battle unfolds, it is to be expected that the tactical CP will move frequently. It must be capable of doing so both day and night. Once a new site has been selected, the signal battalion should establish essential communications prior to arrival of the commander and the tactical CP.

Division Main Command Post

Normally, the division Main CP is located in or near the division support area, out of range of enemy artillery. Most of the division staff, normally supervised by the chief of staff, operates from the Main CP. In addition to the chief of staff section, elements of the G1, G3, and G4, and the air defense artillery, aviation, fire support, and chemical, biological, and radiological warfare sections will be there. The G2 section, a tactical air control party element, and a combat electronic warfare and intelligence battalion element which organizes the main command post intelligence center will also be present.

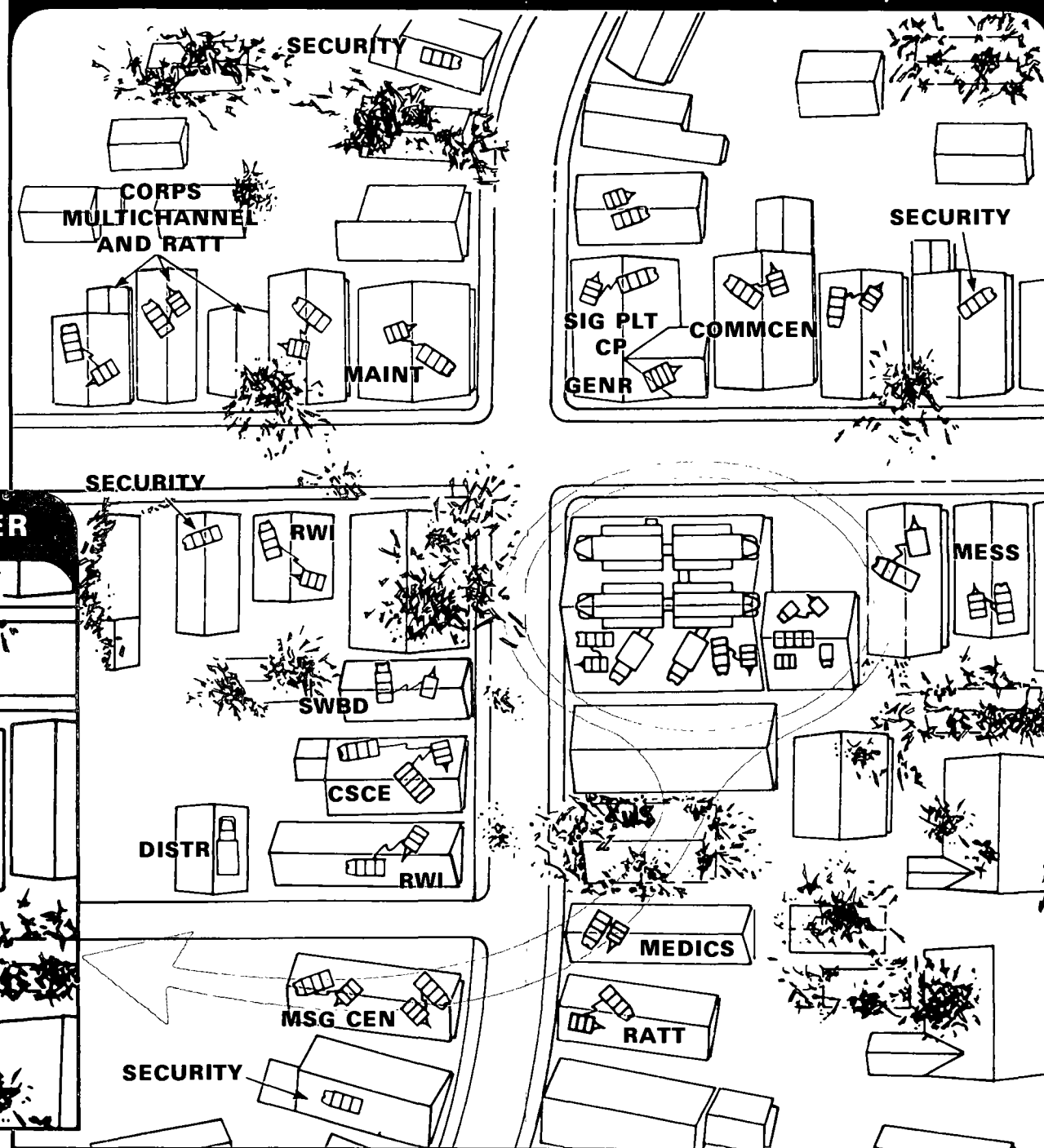
Additionally, the signal battalion's system control element also locates at the Main. Communication support is provided to the Main by the command signal center platoon. Although the division commander will seldom have sufficient forces to dedicate combat forces to command post security, the military police company security platoon can provide some security.

The Main CP is primarily a coordination, information, and communication center. Planning for future operations is also done here.

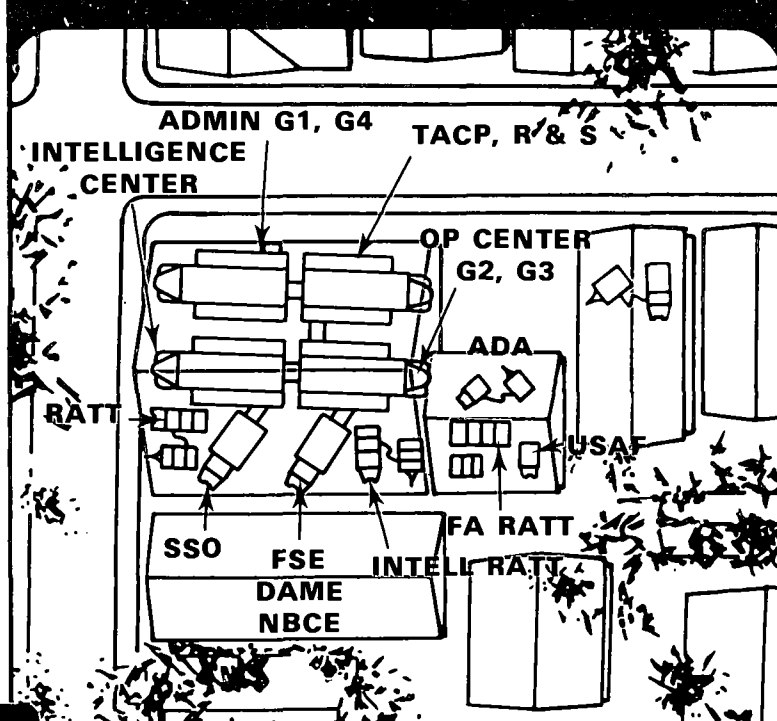
The primary functions of the Main CP are to coordinate those activities that are not coordinated by the tactical CP, to provide necessary reports and information to the tactical CP and to corps, and to integrate and disseminate intelligence from all sources.

If the tactical CP is knocked out or disrupted for some reason, the Main CP will control combat operations. The division artillery command post or a brigade command post may also be used to control operations. The Main CP should be dispersed and well dug-in. A hardened site of any kind is ideal. Towns, villages, cities, and factory complexes are all suitable. Emitters must be remoted as is done at the tactical CP. Electronic, infrared, and other compromising signatures should be reduced to a minimum.

AERIAL VIEW OF MAIN COMMAND POST IN A CONCEALED HARDENED SITE (TOWN)



TACTICAL OPERATIONS CENTER



Operations Security

Internal to all command posts are the normal routine procedures by which messages, letters, memorandums, and other information traffic flow into, out of, and within the headquarters. Normally, routing runs through nodes—the nodes are the message centers. Because these message centers are deluged with more information from more sources than ever before, and because they are administrative instead of operational activities, operational communications must be transmitted through more responsive means. The commander normally charges his chief of staff with the responsibility to define nonroutine means by which combat information is transmitted to insure timely receipt.

It is both possible and necessary to conduct an organized operations security (OPSEC) effort at the Main CP to reduce the probability of detection and disruption of operations by enemy elements. The Main CP will be a principal target of enemy surveillance systems—electronic, infrared, photo, human—directed from all sorts of platforms. Therefore, the Main CP must always have an operations security plan under way. Both active and passive measures will have to be used in cleverly devised and constantly changing patterns which are in themselves deceptive but also represent normal command post operation.

Division Support Area

The DISCOM headquarters, some staff, and other elements are located in the division support area. These may include G1 elements, counterintelligence and interrogation elements from the combat elec-

tronic warfare and intelligence battalion, military police and provost marshal elements, and a tactical airlift element from the USAF Tactical Air Control Party.

Communications

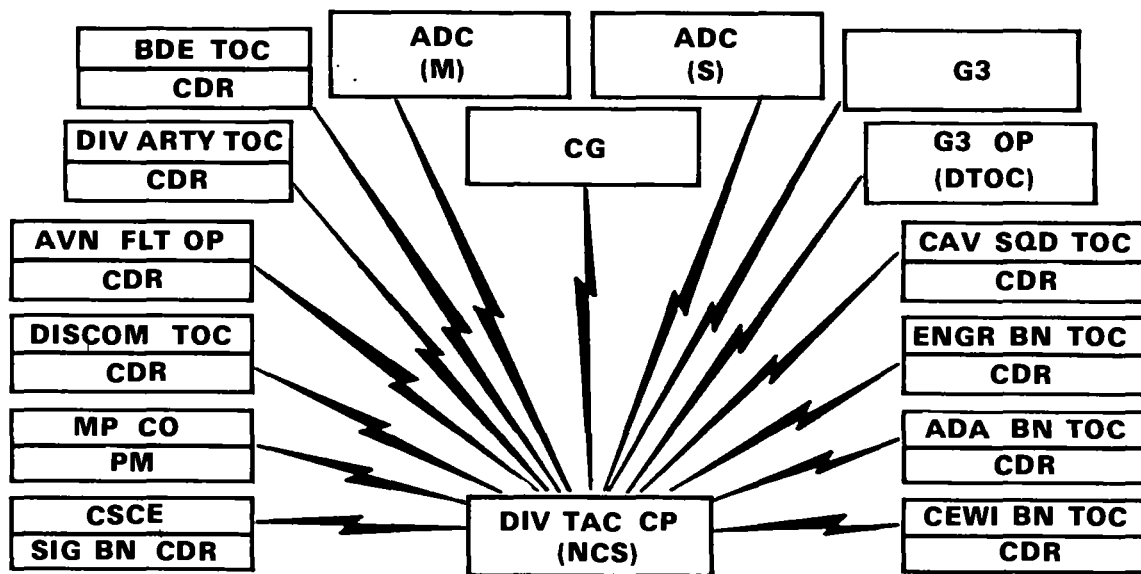
The division communicates by using an integrated system of secure and nonsecure equipment consisting of FM and AM voice, multichannel systems, messenger, radio teletypewriter (RATT), and radio wire integration (RWI). The system is used to transmit information, distribute intelligence, and control fire and maneuver. The division signal battalion, as well as divisional units, has a variety of communications equipment. Divisional communication equipment, however, is extremely vulnerable to enemy countermeasures. Communications security discipline and command and control alternatives are practiced routinely. Command

post electronic signatures are reduced as previously described.

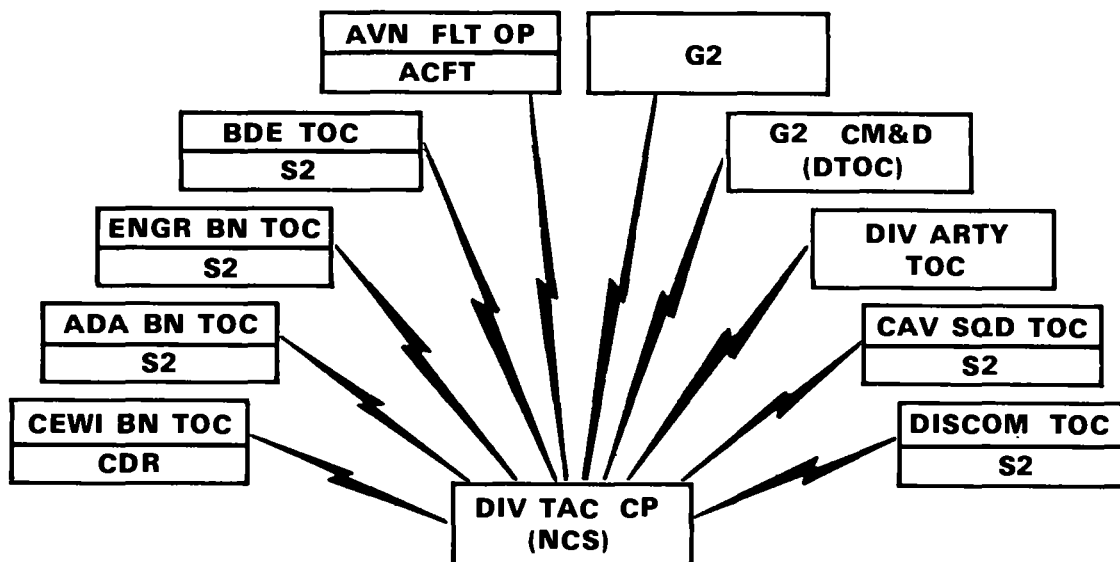
As in the case of electronic surveillance and target-acquisition equipment, electronic counter-countermeasures are used to protect divisional communications equipment from enemy interception and jamming.

Secure FM voice is the primary electronic means used by the division commander to command. Two secure FM nets, a command/operations net, and an intelligence net, are used to communicate from the tactical command post to brigade and division artillery command posts, to the air cavalry squadron, and to other elements as indicated in the illustration on page 3-35.

DIVISION COMMAND/OPERATIONS NET (FM)



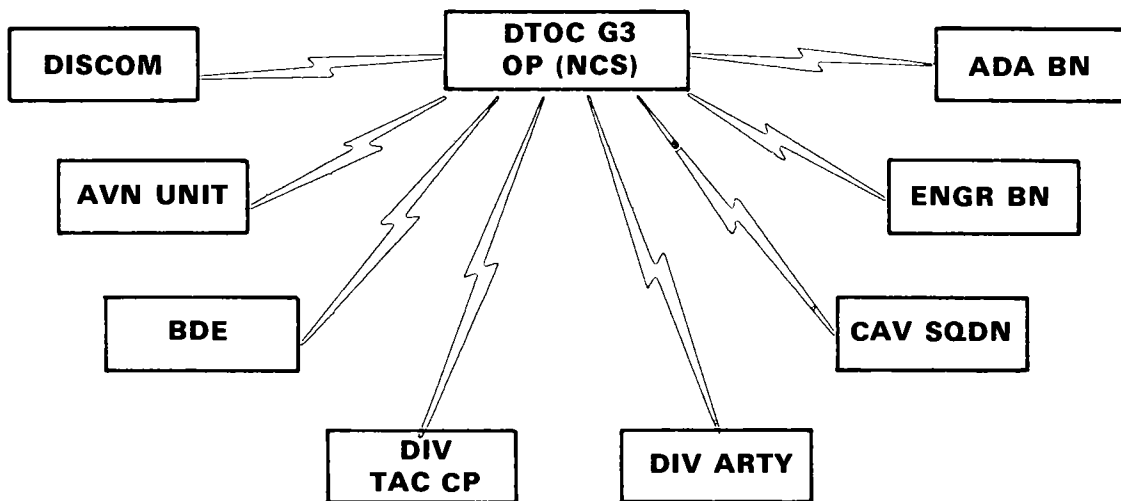
DIVISION INTELLIGENCE NET (FM)



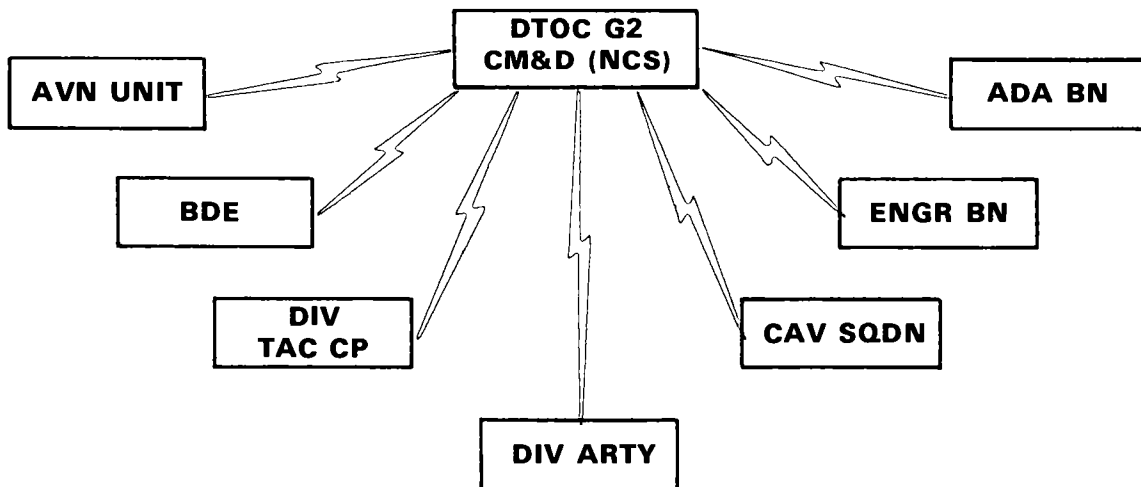
A multichannel network is also available for command control. Corps installs a multichannel network to the division main command post and support area. The multichannel network is an ex-

cellent means of communication, but it takes time to set up and take down. When possible, multichannel teletypewriter systems should be used for lengthy, secure message traffic.

DIVISION OPERATIONS NET (RATT)



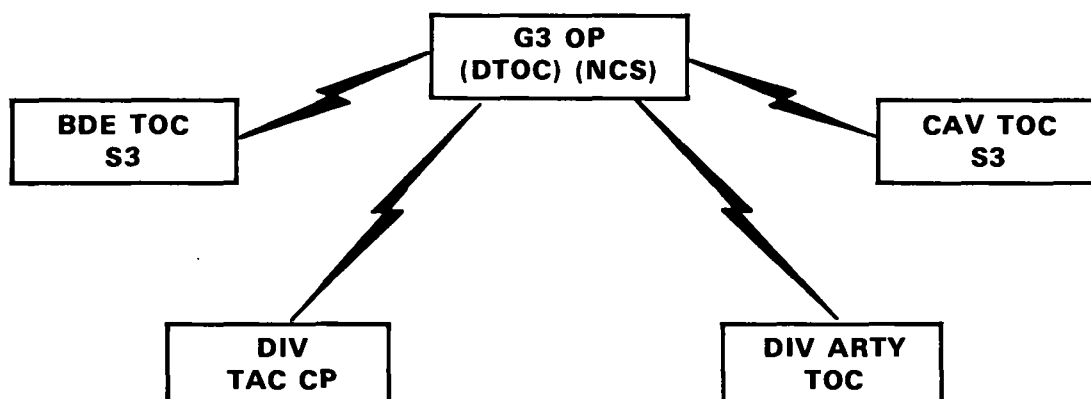
DIVISION INTELLIGENCE NET (RATT)



Secure radio teletypewriter nets augment FM nets and the multichannel teletypewriter system. Radio teletypewriter nets are used for short, high precedence secure message traffic and as an alternate means to the multichannel teletypewriter system. The preceding illustration depicts the division RATT nets for operations and intelligence.

AM voice radio, although not secure, is used to communicate over extended distances between the tactical command post, main command post, brigades, division artillery, and the air cavalry squadron. Short, secure traffic can be transmitted on AM voice radio using operation codes and authentication devices.

DIVISION TACTICAL OPERATIONS CENTER NET (SSB)



Air and ground messengers are used as required throughout the division area. Scheduled ground messenger service is used for bulk traffic and low-priority record

traffic. FM 11-50, **Combat Communications within the Division**, details divisional communications nets and electronic counter-countermeasures.



CHAPTER 4

Offensive Operations

Decisive results are achieved through offensive actions. The attacker seizes the initiative and imposes his will on the enemy, forcing the defender to fight and react in places and at times of the attacker's choosing.

CONCEPT OF THE OFFENSE

Since the defender cannot be equally strong everywhere, it is usually possible to concentrate sufficient combat power to outweigh him at a place of the attacking commander's choosing. Even during defensive operations, the commander should never miss an opportunity to attack.

The primary emphasis of terrain reinforcement during offensive operations is in enemy mobility degradation along counterattack routes and along flanks. In addition, covered and concealed weapon positions should be prepared for overwatching elements to the maximum

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possible extent. The attacking elements must also be concealed as much as possible to increase their survivability on the battlefield. Terrain reinforcement planning must be totally integrated with the tactical planning process to insure that all tactical advantages of the terrain are used.

Infantry can move across rugged terrain or through dense foliage to **surprise** an unsuspecting defender at any time under any weather conditions. Small units can **infiltrate** enemy lines, slip past strong defensive positions, and reassemble to seize critical installations or occupy key terrain. **Stealth, cover and concealment, and deception** enable infantry attackers to hide their movements and close with the enemy before he is fully prepared. Such activities are difficult to control and coordinate. Detailed planning at higher levels, followed by **decentralized execution** by units of battalion and smaller size, minimizes these difficulties and increases the probability of success.

The division commander assigns missions and objectives and allocates forces while allowing subordinate commanders freedom of action in deciding how to fight. Combat support and combat service support units adjust support plans and resupply efforts as brigade and battalion commanders develop their concepts of operation. The division attack thus becomes a blending and coordinating of small-unit operations, each furthering the accomplishment of the division mission.

The division reduces its vulnerabilities by **limiting the exposure** of infantry troops to enemy fires. Rolling trafficable terrain, with good observation and fields of fire, is avoided as an avenue of approach for dismounted infantry attacks. Small units moving on **multiple routes** of advance, using cover afforded by terrain, perhaps at

night or under **concealment** of smoke, reduce the time of exposure and the formation of large lucrative targets. If possible, forces are **infiltrated** through enemy defenses and assembled in rallying areas close to attack objectives. Short-range objectives are selected to reduce movement time, ease command and control difficulties, and enable full use of supporting fires in the assault. Enemy gunners and forward observers are suppressed. Initiative is retained by attacking when and where the enemy is unprepared. The ability of infantry to slip through enemy defenses, avoid strongpoints and heavily defended areas, and concentrate on the battlefield is exploited to defeat the enemy where he is weak.

Infantry attacks require careful planning and aggressive execution. Patrols, reconnaissance units, and other intelligence means are used to provide accurate and timely information on gaps or weak spots in the enemy defenses. When a weakness is identified, the commander chooses a time of attack to surprise the enemy and increase the destructive effects of his attack. Units are prepositioned as close to the attack zone as possible, and supporting fires are massed to assist the infantry assault.

At the critical time, the attacking force masses its maneuver elements and conducts intensive suppressive fires. Artillery smoke and high-explosive fires, tactical air strikes, and scatterable mines isolate the critical battle from effective enemy fires and reinforcement. The actions of small units are directed so that the success of the attack does not depend on the success or failure of any one of its elements. Thus, the commander chooses the decisive time and place to mass maneuver forces, supporting fires, and other elements of the division while minimizing the effects of enemy fires.

Rugged terrain will normally force both the attacker and the defender to employ infantry units for combat operations. Infantry can be used to ferret out defenders from towns and cities or participate in airmobile or counter guerrilla operations. Attacks against mechanized or armored forces are undertaken only when the mobility and firepower of the defender are or can be substantially reduced by rugged terrain, foliage, obscuration, deception, weather, suppression, or surprise. Such attacks are rare and should be avoided.

Once initiated, the attack is carried to a successful conclusion. The enemy's ability to reposition forces or redirect fires is reduced as the attacking infantry closes with the enemy. Enemy positions are rapidly engaged as infantry concentrates to reduce the enemy defensive system. Positions that are too large for immediate destruction or which hamper progress of the attack are bypassed and engaged with follow-on forces and supporting fires. The

attack continues to take advantage of the enemy's confusion to thwart his attempts to reestablish a coherent defense. Every effort is made to destroy enemy combat support, combat service support, and command and control facilities. In sum, attacking infantry:

- Operates as small units—decentralize execution on difficult terrain during periods of reduced visibility.
- Selects short-range objectives.
- Infiltrates where possible.
- Attacks from an unexpected direction at an unexpected time against enemy weaknesses, avoiding enemy strengths.
- Limits massing of troops—concentrating more firepower.
- Uses deception operations in order to surprise.

FUNDAMENTALS OF OFFENSIVE OPERATIONS

There are five fundamentals that guide commanders in the conduct of offensive operations. Although the application of each

may vary from time to time, depending on resources available to the commander, they are the same for any offensive operation.

— See the Battlefield —

To be successful in offensive operations, it is first necessary to know the enemy, his organization for defense, the capabilities of his weapon systems, and how he customarily disposes his forces on the ground.

Battalion and smaller unit commanders must understand how the enemy normally defends. The enemy does this by using a

series of strongpoints organized in depth, attempting to draw the attacker into firetraps.

The division commander and his staff must know much more. They must understand how enemy field and air defense artillery supports the defense; how enemy divisions, regiments, and battalions are controlled; how combat service support is

provided; and where reserves of an enemy division or army are likely to be located. These are the elements the division must suppress or destroy so that battalions can maneuver to bypass or destroy the enemy's system of strongpoints and break through or flank his defenses.

While much of the information he needs may be immediately available, the division commander must tell his information-gathering agencies what else he needs to know. Most important in offensive operations is to know where the enemy is weak or can be weakened. Sometimes it is

necessary to conduct separate operations (for example, a reconnaissance in force) to obtain this information. The division commander and his subordinate commanders should also know, to the maximum extent possible, the terrain over which the division will fight.

The battalion commander can seldom see the terrain or the enemy beyond the terrain feature to his immediate front, either before or during an attack. The division commander, however, through available collection means, can see the terrain and enemy farther away and can provide this information to brigades and battalions.

Concentrate Overwhelming Combat Power

While enemy weaknesses may be known from the outset, most attacks begin with an advance to contact. Once contact is made and an area where the enemy is weak or can be weakened is found, it is necessary to move to concentrate superior forces in that area. Often it is necessary for the division commander to concentrate his battalions on a narrow front to break through enemy forward defenses. Field and air defense artillery concentrate their fires to protect advancing battalions at the point of the main effort. Engineers assist in breaching and clearing minefields and other obstacles, such as barriers or fortifications, which can slow or stop advancing battalions. Electronic warfare support measures (ESM) are concentrated to locate enemy emitters so they can be attacked by fire or jammed by electronic countermeasures (ECM). These actions will disrupt enemy weapon and command control systems.

When concentrating, forces must be thinned out elsewhere, which involves some risk. Thus, it is necessary to deceive the enemy as to the division's intentions, the location of its main effort, and the strength of its units. The enemy's ability to collect information can be degraded by skillful use of terrain and camouflage and by restricting movement to periods of reduced visibility. Skillful use of electronic countermeasures and electronic counter-countermeasures (ECCM) also degrades enemy collection efforts.

Early identification of the critical point of the enemy defenses allows a prepositioning of maneuver forces and supporting forces in advance of the attack. Units may move by infiltration and stealth to attack positions which maximize terrain concealment and protection.

— Suppress Enemy Defensive Fires —

Concentrated forces are vulnerable to enemy fires. So, it is necessary to suppress enemy weapons and to obscure the vision of enemy gunners who can interfere with advancing ground forces and with attack helicopter and offensive air support operations.

While suppression of enemy direct fires is important to the division commander, gunners of direct fire weapons are usually suppressed by battalion weapons and direct support field artillery. More important to the division commander is the suppression of enemy field artillery which can slow or stop the division attack through interference with or destruction of maneuver units, command posts, or combat service support units and operations. Field artillery counterfire (and sometimes USAF offensive air support sorties) is sufficiently concen-

trated to degrade the enemy's capability to interfere with the main effort.

For attack helicopters and USAF aircraft to operate, enemy air defense systems must be suppressed. Electronic support measures and other target-acquisition means can be used to locate enemy air defense weapons. Field artillery and electronic countermeasures can be used to suppress or disrupt those air defenses. Attack helicopters and offensive air support aircraft can also be used, although this is a less desirable solution.

Of equal importance to suppression of FA and ADA is the suppression of enemy electronic warfare systems which can disrupt divisional command and control. Therefore, the division commander must provide for the suppression of enemy equipment that can locate and jam divisional emitters.

— Overwhelm and Destroy the Enemy —

Once an enemy weak spot has been found or one has been created by the massing of fires, the division attacks with maximum speed, surprise, and violence. Prepared positions are bypassed when possible and cleared only when necessary. The advance of the entire division must not be halted when leading battalions are temporarily stopped. Attacking units that become stalled or disorganized are bypassed

by fresh units. Forces are shifted as necessary to exploit enemy weaknesses as they are revealed. Hasty attacks are conducted to overcome enemy resistance. Deliberate attacks are conducted only when necessary. Too much time spent planning and organizing a deliberate attack can result in attacking under more difficult circumstances or in loss of initiative.

— Provide Continuous Support —

Continuous support is necessary for maneuver forces to advance. Field and air defense artillery, engineers, signal, supply, and maintenance units must carefully plan

movement to keep pace with maneuver units. Sustaining the battle becomes a critically important concern of *all* commanders. Ammunition expenditures are apt

to be high, but lack of ammunition must not be allowed to slow or stop the advance. Inoperable weapons and combat vehicles must be repaired as far forward as possible and quickly returned to battle. Those that cannot be repaired forward must be immediately replaced.

The farther the division advances, the more difficult it becomes to provide support and keep lines of communication open. Combat service support commanders must be as aggressive in supporting as combat commanders are in destroying—and they must work together to get the job done.

TYPES OF OFFENSIVE OPERATIONS

Offensive operations are conducted under a variety of circumstances. Opposing forces, terrain and weather conditions, amount of preparation, intent of the commander, and the purpose of the operation are variables which characterize a particular type of offensive operation.

TYPES OF OFFENSIVE OPERATIONS

- Movement to Contact.
- Attack (Hasty and Deliberate).
- Exploitation.
- Pursuit.

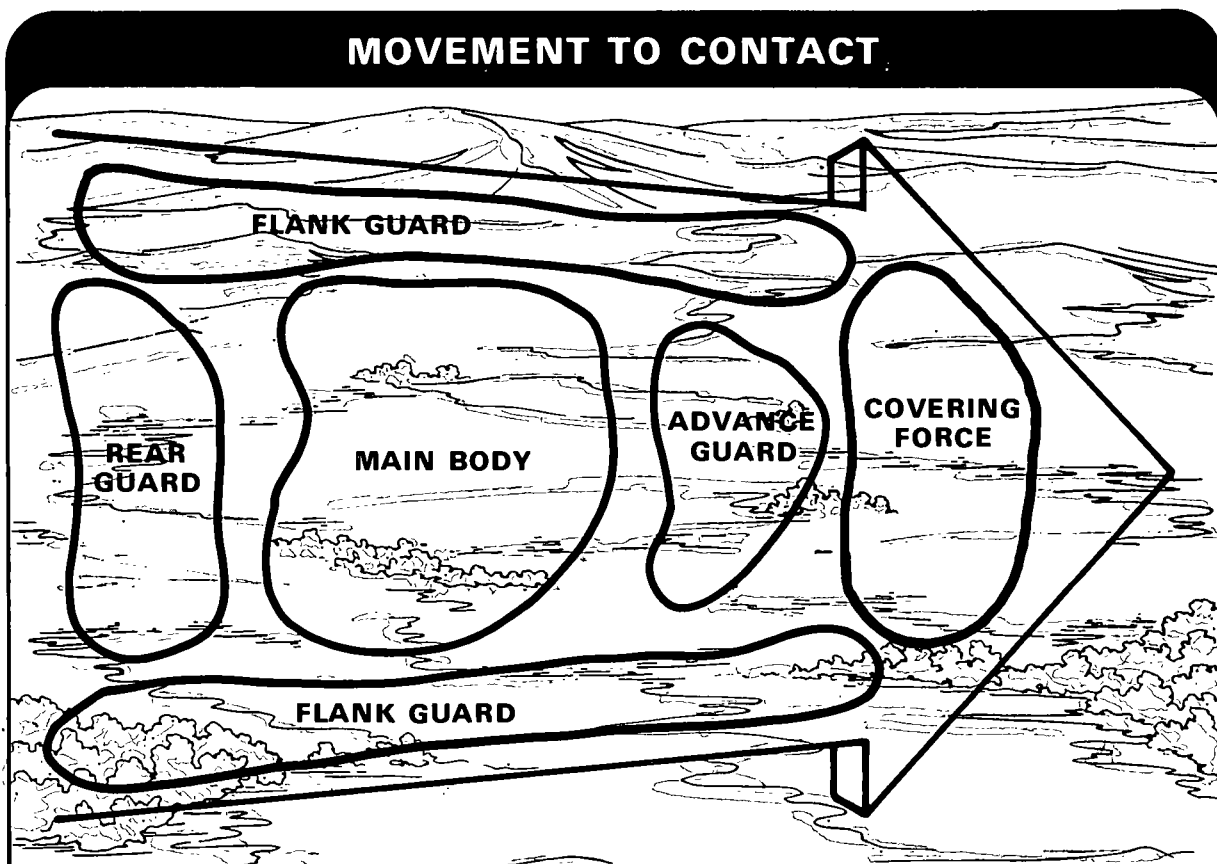
Other types of operations which may occur as part of the offense are **mobility and countermobility operations, smoke operations, and limited visibility operations**. There are also other offensive operations which may be described as **limited objective operations** (reconnaissance in force and raid) or as **tactical deception operations** (feint, demonstration, ruse, and display).

At any one time, the division may be conducting one type of operation while the brigades are conducting another. For example, the division may be exploiting early successes while the lead brigade (or units within the brigade) may be conducting a hasty attack.

Movement to Contact

A movement to contact (NATO term: approach/advance to contact) is conducted to gain or reestablish contact with the enemy. It is used when the enemy situation is vague and the division commander is not certain of enemy dispositions or strengths. Its purpose is the early development of the situation in order to gain an advantage over

the enemy prior to decisive combat. Organization for the movement depends on the mission, terrain, available intelligence, probable order of commitment of units, and relative mobility of units. The following figure illustrates the overall organization of the division for movement to contact.



All-around security is maintained as the **main body** advances with a relatively strong force forward and the bulk of the force uncommitted. This formation avoids unnecessary interference with movement of the main body and allows the situation to be developed by the smallest possible force. The main body prepares for rapid employment as the enemy is met by the covering force and the situation is developed by the advance guard. Decentralized control, rapid commitment of leading forces when contact is made, and responsive field artillery support provide the flexibility which is the key to a successful movement to contact.

The mission assigned the **covering force** is to develop the enemy situation and

to prevent unnecessary delay of the main body. Its operations may include destruction of enemy resistance, securing key terrain, or containment of enemy forces.

The covering force normally operates well forward of the front of the main body. A highly mobile force, such as the air cavalry squadron or a mobile battalion task force, usually provides the basic element of the covering force. It is reinforced with artillery and engineers; and in the case of the air cavalry squadron, with other combat elements. The covering force is provided tactical air support for long-range reconnaissance and close air support.

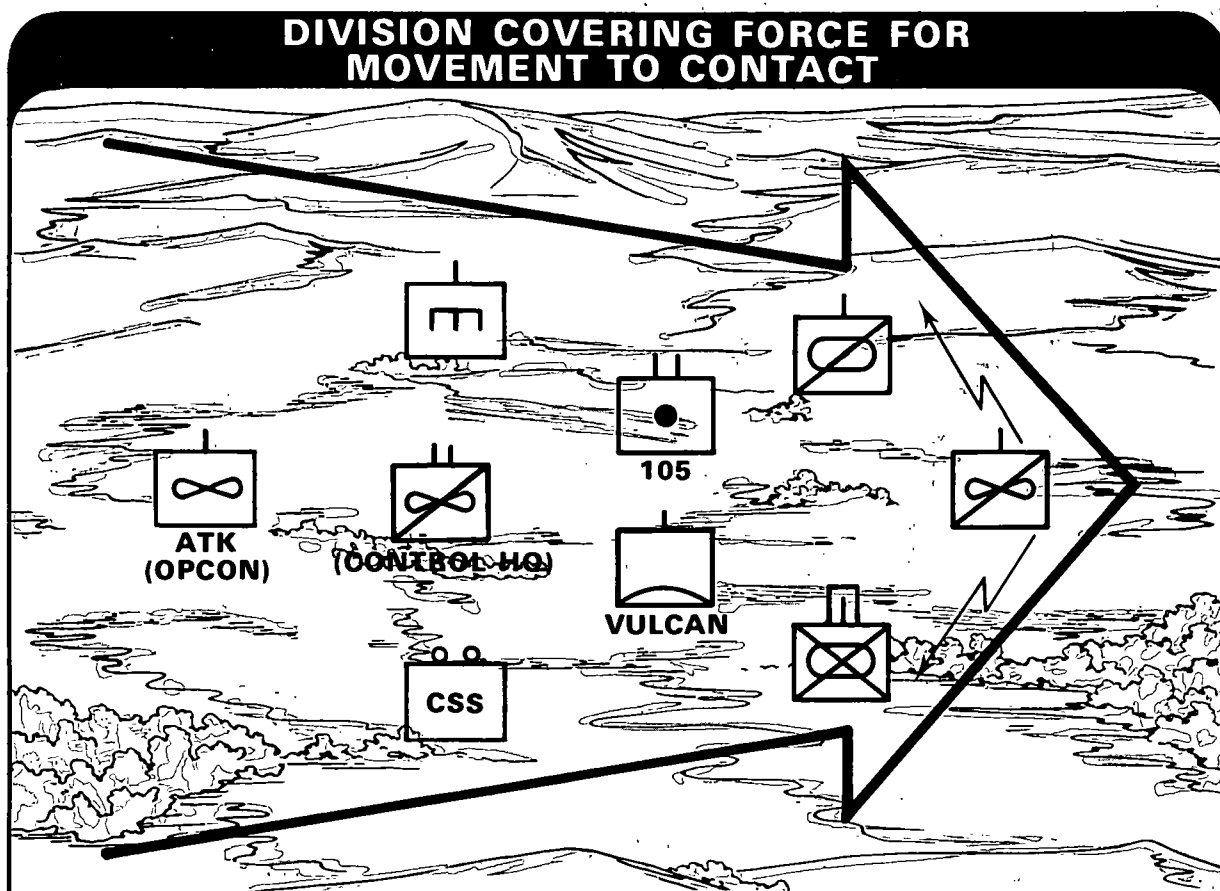
The covering force, shown below, normally operates under division control. However, when the division advances on multiple routes, terrain and distance may require subordinate commanders to control their own covering forces.

When the division marches as part of a larger force, the covering force may be provided and controlled by the higher headquarters. The division **advance guard** is then the contact force between the division and the covering forces.

The advance guard is normally furnished by the leading element of the main body. It is organized to insure the uninterrupted movement of the main body.

Forces assigned to the advance guard may include cavalry, tank, mechanized, or infantry units in the proper proportion to accomplish the mission. Necessary combat support, such as engineers and artillery, is integrated into the advance guard. Emphasis is placed on the use of air cavalry to detect enemy activity in advance of actual contact. The advance guard normally operates under the control of the leading element of the main body.

Flank and rear guards protect the main body from ground observation and surprise attack. These forces must be strong enough to defeat minor enemy forces or to delay a strong enemy attack until the main body can deploy.

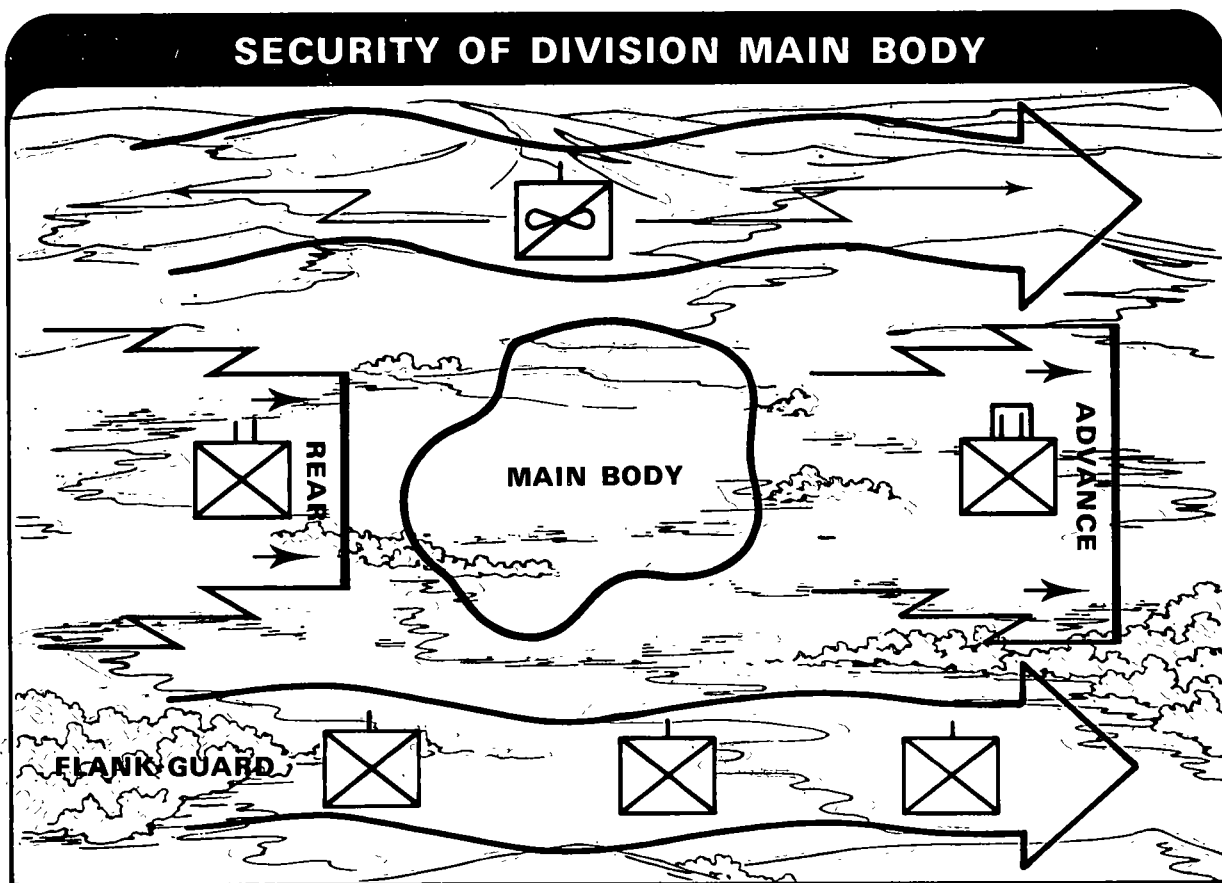


The flank guard travels on routes parallel to the route of the main body. It moves by continuous marching or by successive or alternate bounds and occupies key positions on the flanks of the main body. The rear guard follows the main body.

The rear and flank guards are similar to the advance guard in strength and composition. Infantry battalions, supported by combat aviation battalion elements, are capable of conducting flank and rear guard missions. If the flanks or rear of the division are secured by adjacent or following units, the size of the divisional security forces can be reduced. Flank and rear guards operate under the control of either the division or the adjacent element of the main body.

The **main body** contains the bulk of the division's combat power. It is organized for immediate commitment against major enemy forces or for exploitation of disorganized, surprised, or weakened enemy forces. The main body normally moves to contact in multiple columns to take advantage of the available roadnet and to prevent a smaller enemy force from conducting an effective delay.

When enemy resistance is encountered which is beyond the capability of the covering force and the advance guard to overcome, the division commander commits forces from the main body to maintain the momentum of advance. When units from the main body are committed, the movement to contact ceases and an attack begins.



Attack

The division attacks under a variety of circumstances. Most often, it attacks:

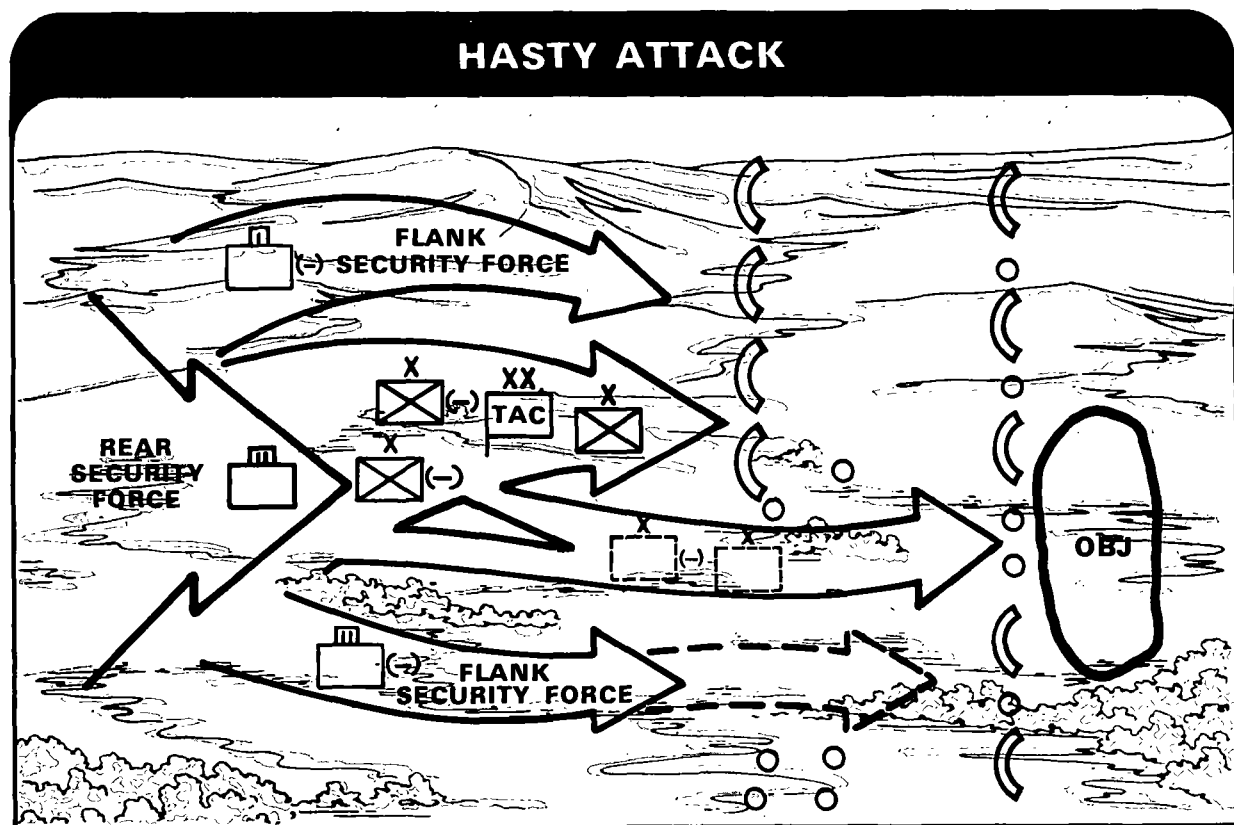
- from defensive positions after an enemy attack has been slowed or stopped;
- as an extension of a movement to contact; or
- following a passage of lines through an attacking or defending force.

Once contact is made, information about the situation must be reported to superior headquarters as quickly as possible. Of immediate importance is the size of the enemy force and the commander's assessment of his chances for success. As the battle develops, status of fuel and ammunition of the force in contact

and supporting field and air defense artillery can become equally important.

It is necessary to determine as quickly as possible if the enemy can be bypassed or must be attacked and destroyed. Bypassed enemy forces must be reported to the next superior headquarters which then assumes responsibility for their destruction, suppression, or containment.

As a general rule, if leading battalions cannot quickly defeat, bypass, or fight through the enemy, the division commander must decide whether to conduct a hasty attack, or, if necessary, develop the situation and conduct a deliberate attack. In any event, a hasty attack may be conducted to insure that the division is not being held up by inferior forces conducting a delay.



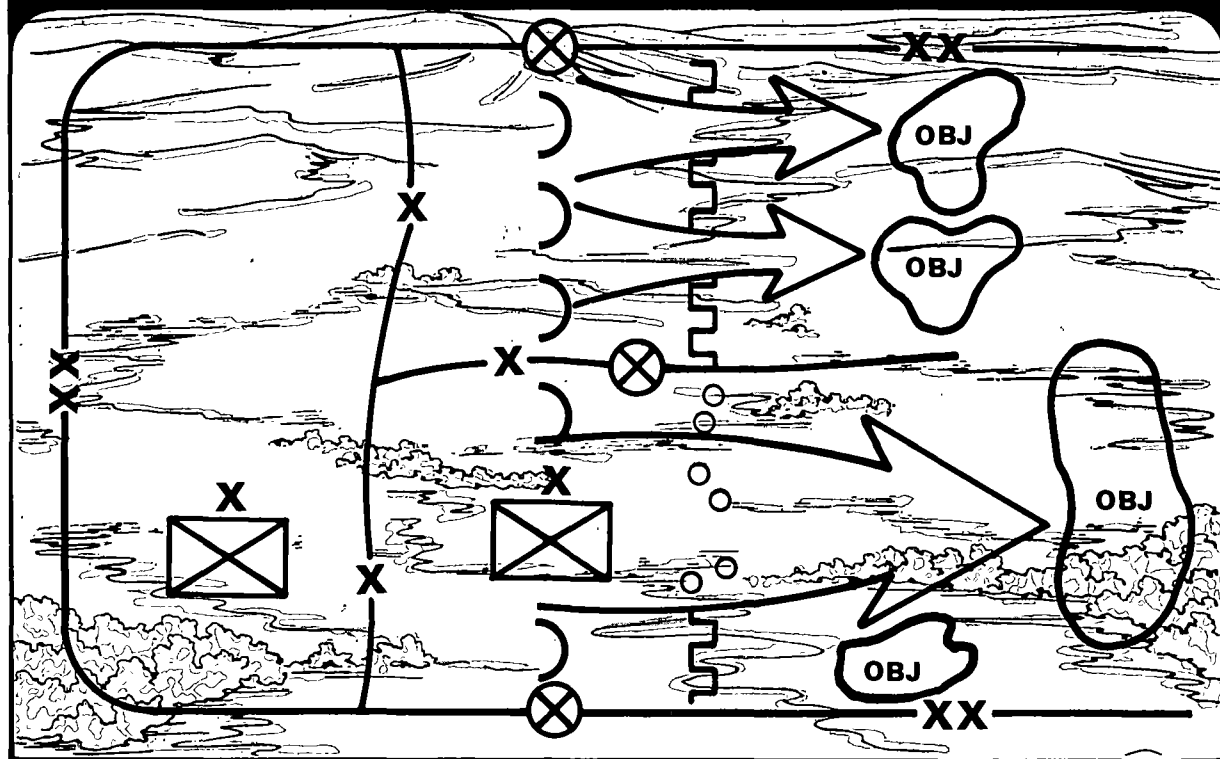
If a hasty attack is to be conducted, fragmentary orders are issued immediately. Those orders set in motion maneuver battalions, supporting field artillery, attack helicopter, and offensive air support in sufficient strength to fix the enemy forward elements in place, penetrate weak spots, or open flanks and move friendly forces quickly through. Speed is most important. If momentum is lost, the hasty attack can fail.

When good information is available about the enemy, the attack may be deliberate from the outset. Such an attack often starts with a passage through a force in contact. In any case, when the division encounters a strong enemy force in well-prepared positions that cannot be overcome by a hasty attack, it must take sufficient

time to prepare for and conduct a deliberate attack. However, only that amount of time absolutely necessary should be taken to prepare for the attack. If too much time is spent in preparation, the enemy could reinforce his positions or even launch an attack against the division. Thus, the initiative could be lost.

It is unlikely that terrain more than 4 or 5 kilometers into enemy territory can be seen or reconnoitered in detail. Therefore, detailed planning of maneuver and fires will usually be limited to this area. Planning for actions beyond this limit must be more general, with maneuver of forces and fires sketched out in broader terms. Units must be prepared to exploit any opportunity presented by terrain and enemy weaknesses.

DELIBERATE ATTACK FROM A DEFENSIVE POSTURE



Two broad options will normally exist when a deliberate attack has successfully breached enemy defenses. The first is to press forward with committed forces toward the next echelon of enemy defenses or the enemy rear area. The second is to turn left or right to roll up more enemy positions, one after another, from the flank, while another force exploits the breach.

Successful infantry attacks rely on identification of an enemy weakness, surprise gained through infiltration or tactical deception operations, effective suppression of enemy fires, and vigorous execution by small units. Success can often be followed by deeper attacks or by a smooth transition to the exploitation or pursuit.

— Exploitation and Pursuit —

Exploitation is initiated when the enemy cannot maintain the continuity of his defenses. The objective is to strike swiftly and deeply into the heart of the enemy's defenses and destroy his ability to conduct an orderly withdrawal. Constant pressure by highly mobile forces denies the enemy the opportunity to reconstitute a strong defense.

Pursuit follows a successful attack and exploitation. Its purpose is to cut off and annihilate a retreating enemy and destroy his will to fight. It is accomplished by maintaining direct pressure on the

withdrawing enemy and by intercepting and destroying the main enemy force.

The infantry division is not equipped for rapid exploitation; however, the infantry division has the capability to exploit and pursue enemy infantry. In terrain more suited to mounted operations, the infantry division may be assigned a follow and support mission behind a pursuing heavy division. The infantry division may be tasked to destroy remaining enemy forces, thus freeing mechanized and armored divisions to maintain continuous pressure on the withdrawing enemy. Infantry battalions attack and destroy pockets of resistance or enemy strongpoints.

— Mobility Operations —

During an attack, particularly against a deliberate defense, the division should expect to encounter obstacles to movement. Existing obstacles—forests, large bodies of water, canals, or rivers—can normally be identified in advance from map or ground reconnaissance. Operations are planned either to bypass these obstacles or to breach or cross them with the assistance of engineer equipment located well forward with leading elements of the attack.

While aerial reconnaissance can sometimes reveal the location of reinforcing

obstacles, they are most often discovered by leading task forces. Most common reinforcing obstacles are:

- Minefields.
- Log obstacles such as abatis, log cribs, stumps, and posts.
- Wire obstacles.
- Tank ditches and craters.

As in the case of existing obstacles, reinforcing obstacles should be bypassed whenever possible. A battalion commander encountering an obstacle which will slow or stop his advance should immediately determine if it can be readily bypassed. If he cannot bypass quickly, breaching operations are started. Even while breaching operations are underway, other battalions, or air cavalry should continue to search for a way to bypass the obstacle. Since obstacles are often covered by enemy fire, it is important to bypass or breach quickly to avoid delaying the advance or exposing divisional units to fire longer than necessary.

There are two methods commonly used to breach an obstacle.

- An **assault breach** is accomplished rapidly with little reconnaissance or ad-

vance planning. An assault breach is often conducted under fire and may be preferred in order to maintain the momentum of the advance. When possible, combat engineers moving with leading companies perform the breach while overwatched by tanks and infantry. In an assault breach, rapid breaching devices are used to clear lanes wide enough to allow combat forces to continue the advance.

- A **deliberate breach** may be conducted by combat engineers if there is time for detailed reconnaissance and planning. The primary difference between an assault breach and a deliberate breach is time. In a deliberate breach, necessary time is taken to do a thorough job. Generally, obstacles are completely cleared, particularly in the case of minefields. Breaching operations are described in detail in **FM 90-7, Obstacles**.

River Crossings

The objective of river crossings is to project combat power across a water obstacle while maintaining the integrity and momentum of the division. Therefore, when possible, rivers must be crossed as a continuation of the offense.

A river crossing is a special operation in that it requires additional planning and support. The obstacle may be a river, a lake, or a canal. Size and composition of the obstacle and the enemy situation will dictate how the crossing is made. It is normally conducted by a division; however, battalions and brigades may cross independently or as elements of a larger force.

Regardless of the type of obstacle, the enemy force, or the size of the crossing force, all efforts must be directed toward crossing without loss of momentum. Only as a last

resort will the division pause to build up combat power and equipment.

Commanders should not surrender the initiative by letting water obstacles needlessly affect their scheme of maneuver. When possible, obstacles are crossed in stride, using local materials and organic equipment. This is referred to as a **hasty crossing**. There are times, however, when this is not possible and a build-up of forces and equipment is required in order to insure a successful crossing. When this is necessary, momentum may be sacrificed. This operation, called a **deliberate crossing**, is discussed in detail in **FM 90-13, River Crossing Operations**.

A hasty river crossing is a decentralized operation using organic, existing, or expedient crossing means. It is conducted as a

continuation of the attack with little or no loss of momentum by the attacking force. A hasty crossing is preferred over a deliberate crossing.

A hasty crossing must be anticipated and planned in advance. Routine procedures, such as command control and location of bridging equipment and AVLBs in the column, are specified in SOPs. When possible, crossing sites are seized intact and in advance of leading elements.

CHARACTERISTICS OF HASTY RIVER CROSSINGS

- **Speed, surprise, and minimum loss of momentum.**
- **Decentralized operations with organic, existing, or expedient resources.**
- **Weak enemy defenses on both banks.**
- **Minimum concentration of force.**
- **A quick continuation of the attack.**

When enemy resistance on both banks is negligible or light, a hasty crossing does not require that all enemy forces be cleared from the river line. It capitalizes on the enemy's confusion and lack of sufficient combat power to oppose the crossing.

To maintain the momentum of the attack and to get maximum combat power across quickly, the division crosses the water obstacle on a broad front. Therefore, whenever the force reaches the obstacle, day or night, the crossing is made. As the bulk of the assault units cross the obstacle, minimum forces are left to secure the crossing sites. The initial assault in the

hasty crossing should result in the rapid seizure of sufficient area to insure that the crossing sites are relatively secure from enemy ground action and direct fire.

River crossing operations, whether hasty or deliberate, are generally planned by dividing the operation into distinct and manageable segments:

- The assault is conducted from the line of march using amphibious vehicles and assault boats. The purpose of the assault is to move as many troops and weapons as possible across the river quickly in order to secure the exit bank. When possible, mechanized forces lead since personnel carriers can "swim." Infantry battalions may be moved across the obstacles by helicopter or assault boat to clear the exit bank. During this part of the operation, smoke operations may be especially helpful.

- Rafting begins as soon as the assault is underway in order to move vehicles and, later, field artillery across the river.

- Bridges are usually installed once assault forces have penetrated the exit bank of the river deep enough to preclude enemy small arms or direct fires on bridge sites. Bridges are generally not used during the assault because they take time to erect and emplace and are vulnerable to enemy fire.

Artillery supports the operation by occupying forward positions and supporting the crossing by fires. As soon as the bulk of the maneuver battalions of each brigade have crossed the river, supporting artillery battalions are echeloned across with priority to the direct support battalions.

Priority for ADA is to protect crossing sites. After the DS artillery battalions cross the river, ADA units cross by echelon. In

this manner ADA supports both banks of the river. Combat service support units cross after the combat and combat support units. Priority is to crossing the battalion combat trains, then brigade trains. After the infantry battalions complete air assault

operations, helicopters airlift supplies forward.

The infantry division has the following organic equipment available for conduct of a hasty river crossing:

RIVER CROSSING EQUIPMENT OF THE INFANTRY DIVISION

EQUIPMENT	CAPABILITY	UNIT
APC	Transport for Mech Bn	Mech Inf Bn
Helicopters	Lift for Combat Elements of 2 Rifle Companies	Combat Avn Bn
Assault Boats	Ability to cross 1 Rifle Company (15 to 18 men rafts)	Engr Bridge Co
MAB	1-144 meters of bridge or 4 CL 60 rafts	Engr Bridge Co
AVLB	4 launchers/6 bridges 2 launchers/2 bridges	Engr Bridge Co Tank Bn

Counter mobility Operations

Although obstacles are used by the division most often during defensive operations, they may also be used from time to time during an attack. When necessary, mines or craters can be used to protect a vulnerable flank or a unit reorganizing on an objective if the unit is to be there for an

extended period. The family of scatterable mines (FASCAM), soon to be introduced into the US Army, will give the division the capability to emplace mines in the enemy rear to block enemy reinforcements, routes of withdrawal, and counterattacking forces.

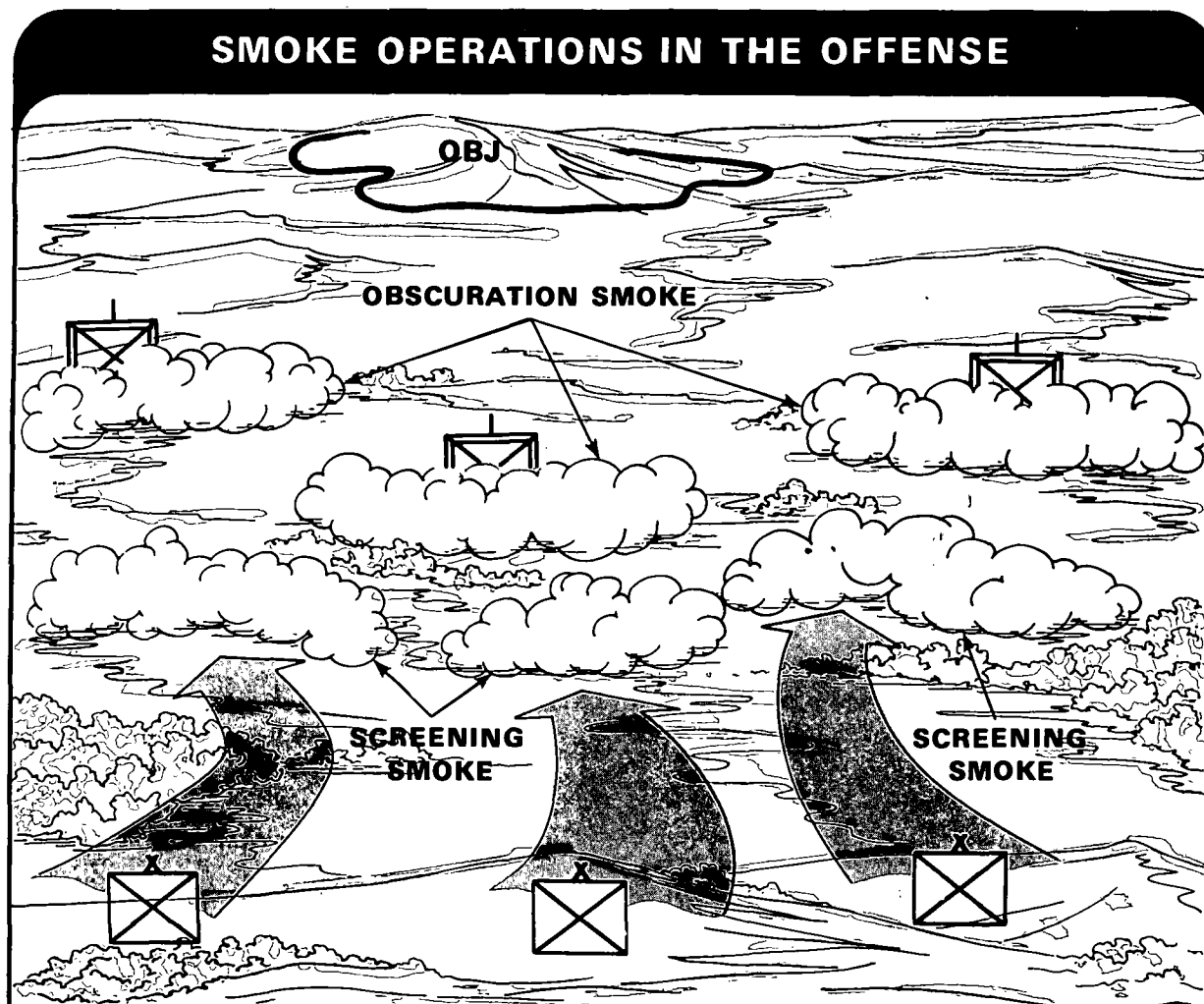
Smoke Operations

During offensive operations, smoke delivered by field artillery and mortars is used to degrade enemy observation of divisional units. *Obscuration smoke* is placed on or near enemy positions to blind gunners and observers while *screening smoke* is placed between divisional and enemy forces to conceal divisional units.

Smoke may also be used to deceive the enemy as to the division's intentions; for example, smoke may be used to attract the enemy's attention on one part of the

battlefield while divisional units attack on another.

In the attack, when smoked by the enemy, divisional units should move rapidly out of smoked areas to regain good observation and fields of fire and continue to advance. Care must be exercised to avoid being silhouetted against smoke. Movement techniques, good use of natural cover and concealment, and overwatch are as important in a smoke environment as in operations during normal visibility.



Limited-Visibility Operations

The division will often attack during night and other periods of limited visibility. Offensive operations during such periods provide the advantage of striking a defender when the range of his observation and weapons is reduced and mutual support between positions is limited. Such operations may be conducted to:

- Achieve surprise.
- Exploit earlier success.
- Maintain momentum.
- Rupture strong enemy defenses.

Modern devices for night vision provide the division with the capability of fighting at night much as it fights in daylight. This capability is modified by somewhat reduced engagement ranges. White light artificial illumination should be used only when night vision devices are not available in sufficient quantities, when ambient light levels are very low, or when the use of night vision equipment affords the enemy an advantage. Flares do not discriminate between friend and foe and may illuminate both. Changes in wind direction can expose attackers while defenders hide in the shadows. Searchlights and other active illumination means disclose their sources. The side equipped with passive devices has a distinct advantage over the side that is not.

The degree of advantage that may be gained by using illumination depends on the extent to which visibility is limited and on the availability of night vision devices to both attacker and defender. During periods of darkness with high ambient light levels, passive night vision devices will allow the

battle to be fought using daylight tactics. However, detection and engagement ranges, length of bounds, and the ability to move on covered and concealed routes all may be reduced. When ambient light levels are very low or when the defender has an advantage in night vision devices, artificial illumination may be necessary.

Visibility limited by snow, rain, fog, or smoke presents special problems in both navigation and maneuver of forces. Target acquisition is complicated by the difficulty of identifying friend and foe.

Human efficiency is reduced by the inability to see. Many tasks that are simple in warm dry weather become difficult to perform in snow or rain. Encumbered by parkas, raincoats or ponchos, mittens, or other special clothing, soldiers take longer to accomplish basic tasks and tire more quickly. The effectiveness of some radar systems may be reduced by dense patterns of snow, rain, fog, or smoke; and night vision devices are of little help.

The extra problems created by extremely limited visibility should not discourage planners, for each can be overcome. The enemy has the same problems and more. He does not know when and where the attack will come, and any factor which limits the range of weapons favors the attacker. Additionally, it will take him longer to concentrate reinforcements against the attack. Limited visibility will often create the conditions necessary for a successful attack.

Fire support is planned and fires are available even though the attack may be unsupported initially. Suppression requirements are normally less because enemy direct fire weapons and indirect fire observers will already be restricted.

Reconnaissance should be conducted by leaders at all levels. Plans should be detailed and coordinated; but above all else, they must be simple.

During limited visibility operations, the division may direct subordinate units to conduct:

- Movement to a more favorable position for a daylight attack.
- Infiltration by dismounted elements.
- Attack of an occupied objective.

MOVEMENT TO A MORE FAVORABLE POSITION. When attacking an enemy disposed in positions affording good long-range fields of fire, the last 3000 meters of the approach may produce unacceptable losses. Under these circumstances, it may be better to wait for a short period of time to take advantage of darkness or the arrival of bad weather or fog. Terrain objectives that are believed to be unoccupied are selected. Forces are maneuvered up to or between enemy positions onto terrain which facilitates destruction of the enemy when visibility improves or which forces him to react because he has been outflanked.

INFILTRATION is the movement of all or part of a unit to a more favorable position to accomplish its mission. The prime consideration during the movement is to avoid detection and engagement. While it may be made in conjunction with defensive operations, it is primarily an offensive maneuver. The commander may order an infiltration to move through gaps in the enemy's defenses to:

- Attack lightly held positions.
- Attack strongpoints from the flank or rear.

- Occupy positions from which the main effort can be supported.

- Secure key terrain.

- Conduct operations in the enemy rear area.

Ideally, infiltrations are made during periods of reduced visibility, over rough or difficult terrain, or through areas which the enemy does not occupy or cover by surveillance.

Fire support is available throughout the operation. Targets should be engaged first with indirect fire to avoid disclosing the exact location of the infiltrating elements.

ATTACK OF AN OCCUPIED OBJECTIVE. Techniques used to attack an occupied objective during periods of limited visibility are similar to those used in a deliberate attack during daylight. Detailed knowledge of enemy dispositions on each position to be assaulted must be available to make this type attack successful. The maneuver force can often get closer to an enemy position by capitalizing on the enemy's inability to acquire and engage long-range targets and, on reduced mutual support between enemy positions because of lack of visibility. Although the principle of attacking enemy weaknesses holds true, attacks during periods of limited visibility can be used to rupture strong enemy positions when no weaknesses can be found.

Distances to be covered should be relatively shallow (1 to 2 kilometers from the line of departure to the objective). Leaders at all levels should have the opportunity to observe the terrain all the way to the objective during good visibility.

Command control will be primarily by radio once the attack begins. Insofar as they can be seen, visual aids for recognition may

assist in control of forces. Color panels, arm bands, luminous strips, or patterns may help. Objectives will usually cover less

ground than is normally the case and must be sufficiently prominent so that they can be easily found.

Limited-Objective Operations

A **reconnaissance in force** is a limited-objective attack to obtain information and to discover and test enemy dispositions and strength. The reconnaissance in force is also conducted to cause the enemy to react and thereby reveal plans or vulnerabilities in his defensive system. Such vulnerabilities, when promptly exploited, could lead to important tactical successes.

A reconnaissance in force is conducted in much the same manner as a deliberate attack. However, there are major differences. **First**, the purpose of the reconnaissance in force is to gain information about the enemy. Objectives are selected that are of such importance to the enemy that his response will generate information regarding location of reserves and second-echelon forces, available artillery fires, and antitank positions. If possible, the objective is selected for its contribution to penetration or envelopment of enemy defenses and to facilitate future operations.

Second, reserves for a reconnaissance in force are stronger than those required for an attack. The division may need to exploit rapidly an enemy weakness, when found, or reinforce a reconnoitering unit that meets an unexpectedly strong enemy response. The division may conduct two or more such operations simultaneously or in rapid succession. Normally, battalions are used, but brigades may be used if necessary.

Reconnaissance in force develops information more rapidly and in more detail than other reconnaissance methods. The commander must compare these intelligence

advantages with the risks such operations entail. It may be possible to use other intelligence-collection means and avoid the possibility of premature engagement under unfavorable conditions.

Raids are limited-objective attacks with specific objectives and are followed by a withdrawal or extraction of the raiding force. Raids are conducted to:

- Capture prisoners or enemy materiel.
- Destroy enemy materiel or installations.
- Obtain specific information of a hostile unit (its dispositions, location, strength, capabilities, or methods of defense).
- Temporarily seize and hold terrain in support of other operations.
- Deceive or harass enemy forces.

Infantry forces may infiltrate between enemy strongpoints and conduct raids of limited depth. Airmobile raids may be conducted using division or corps aviation assets. Employment requires detailed coordination for force extraction since the raiding force does not possess the firepower or mobility to deal with major enemy reactions.

Unlike the reconnaissance in force, the raid depends on precise, timely intelligence. The commander must structure the raiding force to overcome anticipated problems.

Although initial planning is detailed and highly centralized, control during the conduct of the operation is decentralized.

When possible, the force rehearses the raid on ground similar to that over which it will move and under conditions similar to those anticipated during the actual raid.

As in any offensive action, preparatory and supporting fires are employed. Suppressive fires isolate the objective, prevent

or limit counterattacks, and assist the withdrawal of the raiding force. When surprise is desired, fires are planned but are held "on call" for later use.

The raiding force must accomplish its mission and withdraw before the enemy can react effectively. The withdrawal is planned and executed with the same precision and thoroughness as the attack phase. Plans are also made for emergency extraction if the withdrawal is blocked.

Tactical Deception Operations

Feints are diversionary supporting attacks. They are usually limited-objective attacks varying in size from company team to brigade. They contribute to the enemy's defeat by drawing his attention away from the main attack.

Feints assist friendly offensive operations by causing the enemy to:

- Commit reserves prematurely.
- Shift supporting fires from the area of concentration.
- Reveal enemy defensive positions and fires.
- Become confused and indecisive.

The timing and location of the feint are critical to the success of the division's main attack. Units conducting a feint execute the attack violently to convince the enemy that the feint is the division main effort. If the feint is successful in penetrating the defensive system, exploitation of the success may be ordered by the division commander.

A **demonstration** is a show of force in an area where a decision is not sought. Although the demonstration is similar to a

feint, some force maneuver may be required, but no contact with the enemy is intended. The nature of a demonstration permits use of simulations, decoys, dummies, and in-operative equipment to deceive the enemy. Few forces are required and maximum flexibility of design and execution are allowed the demonstration commander.

Ruses are preplanned or impromptu single actions designed to deceive the enemy as to the actual time, place, and nature of friendly operations. Ruses may be employed by tactical units to cause the enemy to disclose his intentions, state of morale, or combat readiness.

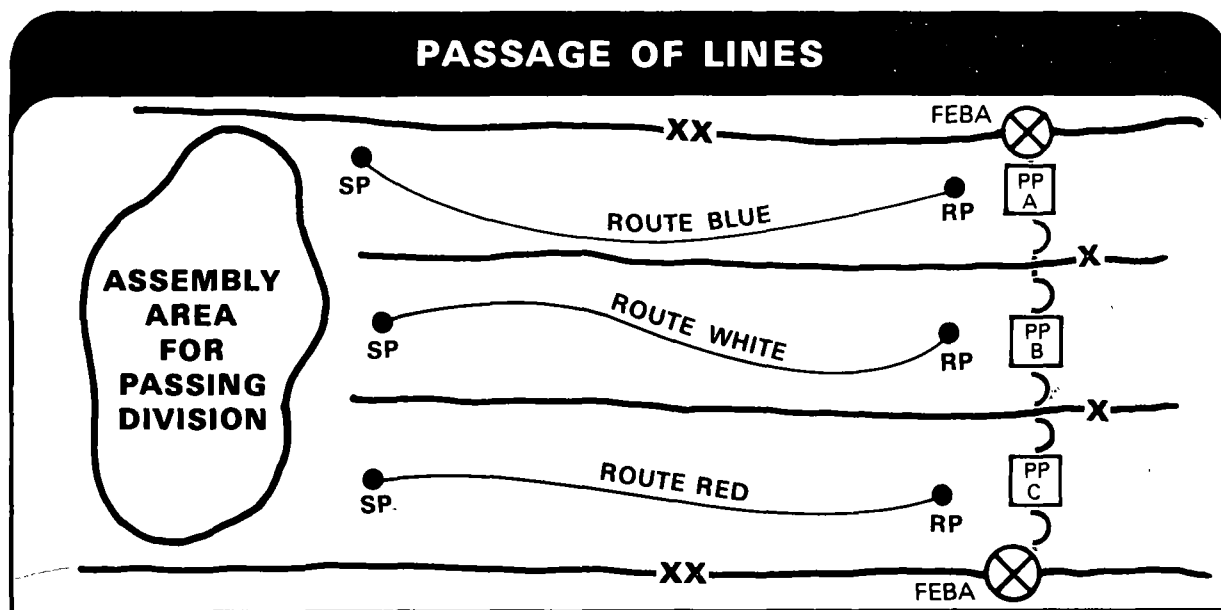
Displays are actions taken to deceive the enemy through the use of static devices. Simulations, disguises, portrayals, or a combination of means are used to present a false picture to the enemy. Objects such as field artillery emplacements or field fortifications can be *simulated*. Targets of low tactical value, such as unserviceable trucks, can be *disguised* as ones of high tactical value, such as tanks. Units may *portray* other types of units using mockups of tanks or air defense weapons. Tactical deception operations are further described in **FM 90-2, Tactical Deception**.

Passage Of Lines

A forward passage of lines is an operation in which one friendly unit moves forward through positions held by another friendly unit. When possible, passage should be through elements not in contact, or in an area lightly held by friendly forces. This technique helps prevent congestion.

Normally, the moving division assigns boundaries to designate those areas through which subordinate elements will pass. These boundaries usually correspond to those of the stationary force. Specific details of the passage are coordinated between the respective division subordinate unit com-

manders. For example, a unit manning contact and passage points must provide information concerning minefields in the area, safe lanes, and, if necessary, guides. Once started, the passage is completed as quickly as possible to minimize the vulnerability of the two forces. The moving force must assume control of the battle as soon as its lead elements have passed through the stationary force. Artillery in support of units manning passage and contact points is usually integrated into the fire support plan of the unit passing through.



PREPARING FOR OFFENSIVE OPERATIONS

The division prepares for offensive operations generally as described in chapter 3. That is, as information about the enemy and terrain is gathered, the commander estimates the situation and the staff provides estimates. Having considered his staff's estimates, the commander then develops his concept of the operation and announces it to his staff. He provides them with sufficient detail to understand exactly

what he desires accomplished. As a minimum, he should provide:

- Time and place of attack.
- Scheme of maneuver.
- Task organization.
- Control measures.

Time and Place of Attack

The *time* of attack may be provided by a higher headquarters, or the commander may be free to choose the time. In the latter instance, he must consider the time needed for reconnaissance, for gathering additional information about the enemy, and for subordinate units to prepare for the operation.

Often, when faced with an enemy in strength, it may be best to attack under cover of darkness or during other periods of limited visibility (fog, snow, or rain) even though control may be more difficult.

It must be remembered that the time used by the division to prepare to attack is also time provided to the enemy to prepare to defend or even to attack the division. If too much time is taken in preparation, the opportunity to attack may be lost.

The *place* to attack is the location which offers the best chance of success. An attack is aimed at a weakness in the enemy's defenses. If a weakness cannot be detected, one must be created. This can be accomplished through the use of fires, fire and maneuver, or deception to cause the enemy to shift his forces.

Terrain also influences place of attack. Battalions and companies advance from one covered and concealed position to the next. The division moves along lines of communication that provide for rapid advance of all combat and support units. It is most desirable for the commander to reconnoiter terrain personally, particularly where the main effort will occur.

Scheme of Maneuver

The scheme of maneuver will depend on the type of offensive operation being conducted, the guidance from higher headquarters, and the intent of the commander. An offensive operation is normally intended to accomplish one of the following:

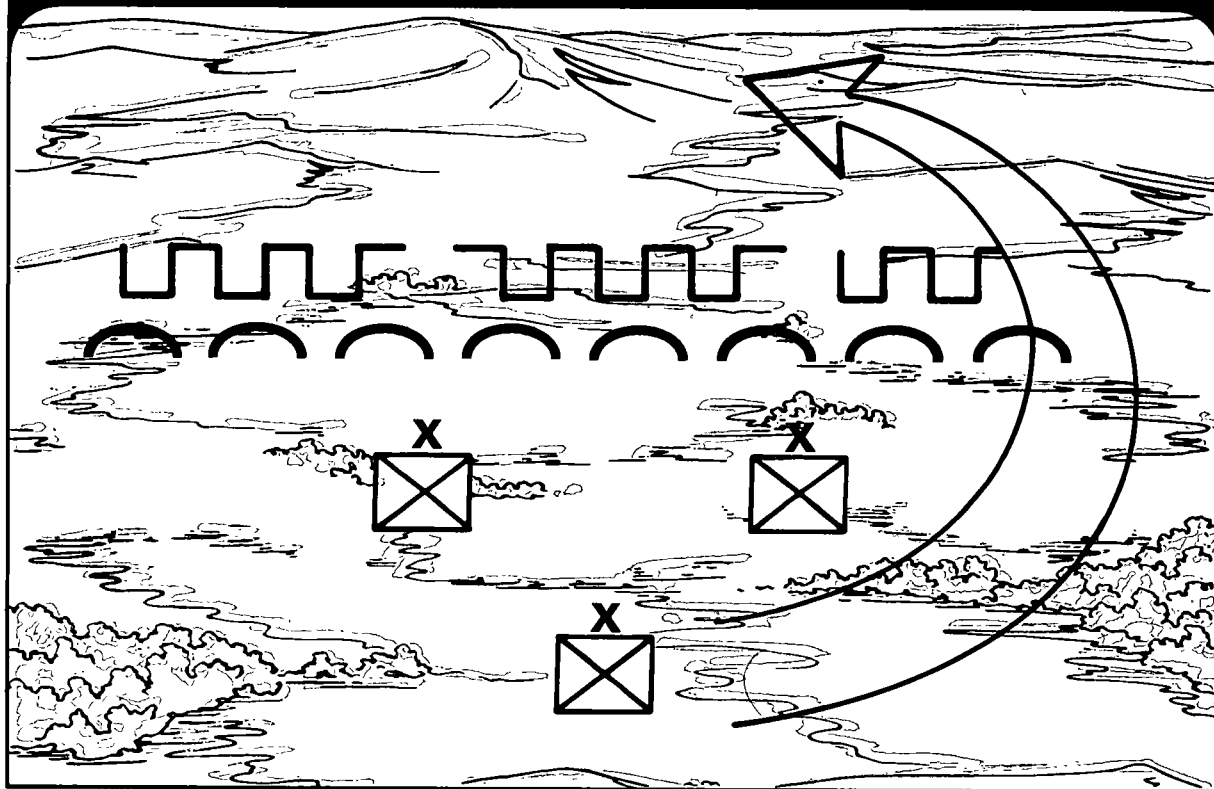
- Overrun and destroy a weaker enemy in position.
- Fix or hold an enemy force in position by suppression.
- Rupture and pass through enemy defenses to secure a deep objective.
- Bypass enemy main defenses to strike him from the flanks and rear thereby causing him to fight in an unexpected direction or directions.

Enemy positions can be approached from the front, flank, or rear. Distinctions between forms of maneuver exist primarily in the intent of the commander. There are two basic forms of maneuver used by the division:

- ENVELOPMENT.
- PENETRATION.

Corps and division seldom dictate the form of maneuver to be used by the next lower echelon. Mission-type orders are issued that allow the subordinate commander to select the appropriate form of maneuver. Therefore, each echelon analyzes the mission, the characteristics of the area of operation, the disposition of friendly and enemy forces, and the relative combat power to determine the form of maneuver best suited to mission accomplishment.

DIVISION CONDUCTING AN ENVELOPMENT



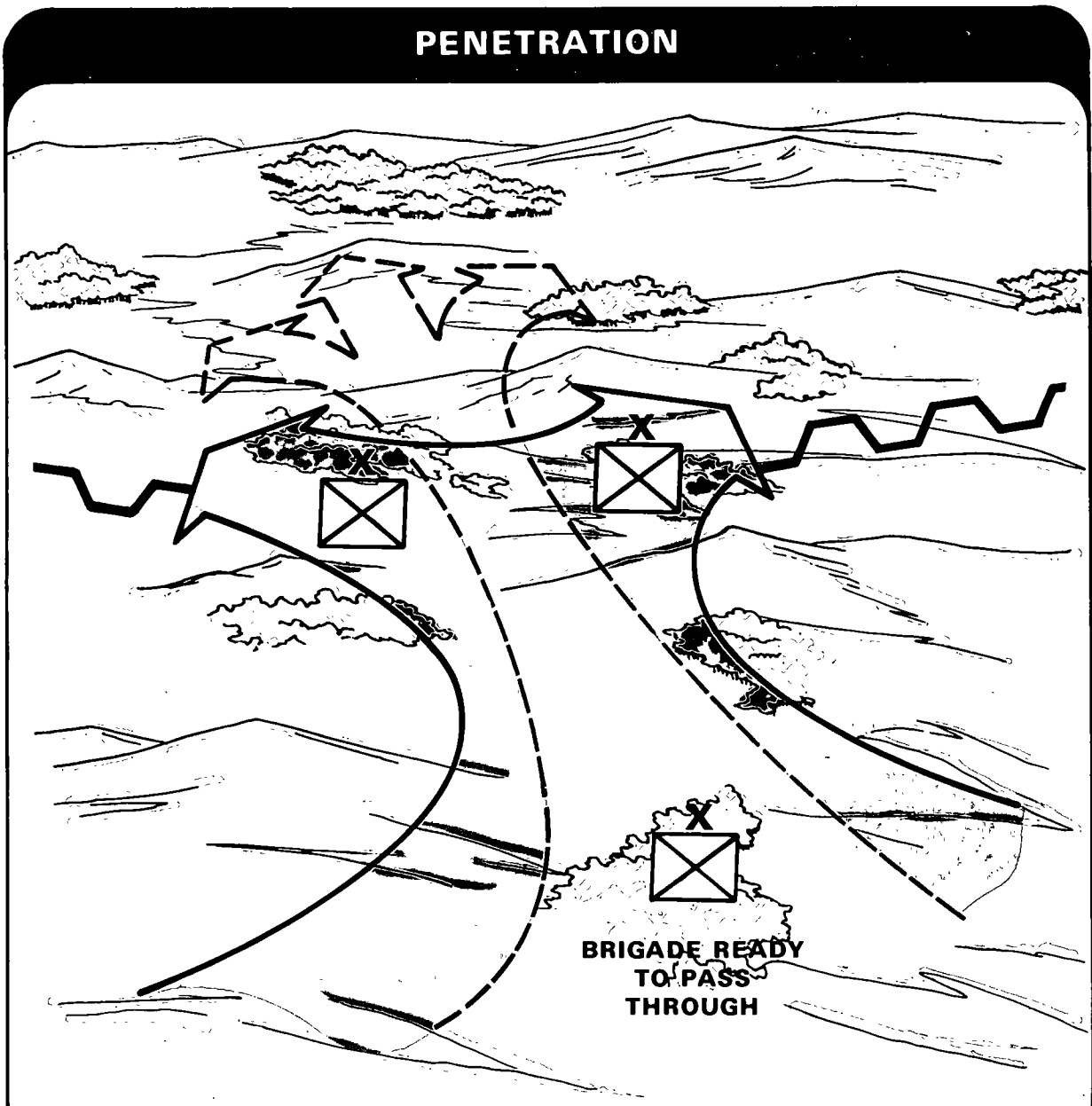
ENVELOPMENT. The envelopment directs a major portion of the attacking unit's combat power *against the flank or rear* of the enemy's defensive forces. It avoids the enemy's main defensive strength by attacking an unprotected or lightly guarded flank, or by passing over it with airmobile or airborne forces (vertical envelopment). The attacker secures terrain in the enemy's rear that cuts escape routes, disrupts communications and support, and causes the enemy to fight in two directions.

The infantry division commander must carefully weigh his relative firepower and mobility. Once the decision to attack is made, the enemy force must be fixed in place and prevented from redispersing forces to counter the envelopment. The infantry

division conducting a ground envelopment will often move through rough terrain which minimizes the vehicular movement of the defender and capitalizes on the foot-mobility of the infantry. Small infantry units may be infiltrated into attack positions close to secondary objectives to fix the enemy in place and assist the enveloping force. Air cavalry is used to slow enemy reaction and to augment the firepower of enveloping forces. If augmented by helicopters, the division may rapidly bypass enemy forces to strike against unprotected rear area facilities. Limited-objective or tactical deception operations may be conducted to divert the enemy's attention and delay reaction against the enveloping force. The enemy can also be fixed by fires, by scatterable mines, or by a combination of measures.

PENETRATION. A penetration *breaks through* prepared enemy defensive positions by concentrating overwhelming combat power on a narrow front. The penetration can be more costly in men and materiel than an envelopment but may be the preferred maneuver when:

- Time is critical.
- The enemy is overextended.
- The enemy does not have an exposed flank.



The purpose of a penetration is to rupture enemy defensive positions quickly, hold the shoulders of the gap created, move forces through the gap, and seize objectives deep in the enemy's rear. The intent is to destroy the continuity of the enemy's defense.

The penetration requires a massing of forces and fires against a narrow portion of the enemy's defenses before the enemy is able to reposition forces to defeat the attack. If terrain permits, the tank and mechanized battalions should be used to maximize their firepower and shock action to rupture the enemy's positions at the point of penetration. Once the defender is overwhelmed at the point of attack, sufficient forces must pass through the gap quickly to secure the objective. Fires, in-

cluding smoke, are delivered on defensive positions to isolate forces at the point of concentration and to deprive the enemy of mutual support.

The initial stages of the penetration often favor employment of tactical deception and small-unit operations by the division. Infantry forces remain under cover and small-unit control until concentrating immediately prior to the attack. Suppression of the enemy is particularly critical at this stage since moving infantry is especially vulnerable to enemy fires. The infantry rapidly closes with the enemy and ruptures his defenses at the weak point. Attacking forces pour through the gap and widen the shoulders of the penetration. The infantry secures the gap and assists the passage of additional forces.

Task Organization

As described in chapter 3, the organization of the division for combat will depend on the mission, the enemy, the terrain and weather, and forces available.

Terrain permitting, the tank and mechanized battalions should be task organized into the lead elements of the attacking force to take advantage of their firepower and armor protection.

The priority of supporting fires is normally assigned to the main effort. Field artillery preparations may be fired if the destructive or suppressive effects are greater

than the resulting loss of surprise, or if sufficient targets have been located to justify the expenditure of ammunition.

Air defense artillery protects leading maneuver forces, the division's command posts, reserves, nuclear delivery systems, and combat service support elements.

Priority for engineer support is to the main effort. As impediments to mobility (minefields, unfordable rivers, and craters) are encountered, engineer elements move to assist the maneuver force in overcoming the obstacles and continuing the attack.

Control Measures

Control measures are necessary during the conduct of offensive operations. Those most frequently used are listed below and shown on the following page.

1 **Assembly areas** are necessary for the issuance of orders, organization for combat, maintenance, supply, and rest. The command assembles in the assembly area to prepare for operations.

2 **Routes of advance** show the assigned route of march and are labeled with a number, letter, or name. The **start point (SP)** and **release point (RP)** may also be shown on routes of advance.

3 **Contact points** are designated places where two or more units are required to make physical contact.

4 **Passage points** are designated where the unit being passed is located, and they show where the commanders agree that the passing unit should physically move through.

5 **Lines of departure (LDs)** are designated to coordinate the departure of attack elements. The LD should be easily recognized on the ground and on the map; and it should be generally perpendicular to the direction of attack. The line of departure may be the existing line of contact (LC).

6 **Coordinating points** indicate specific locations for coordinating fires and maneuver. They are indicated where a boundary crosses the FEBA and should be indicated where a boundary crosses phase or report lines.

7 **Checkpoints** are reference points used to facilitate control. They may be selected throughout the zone of action or along an axis of advance or direction of attack.

8 **Phase lines** extend across the zone or likely area of action and are located on easily recognized terrain features such as ridgelines, streams, and roads. Phase lines are used to control the forward movement of units.

9 **Axes of advance** indicate the general direction of movement of an attacking unit.

10 **Boundaries** are used to delineate zones of action of units in the attack and to assist in controlling the fires and maneuver of those units.

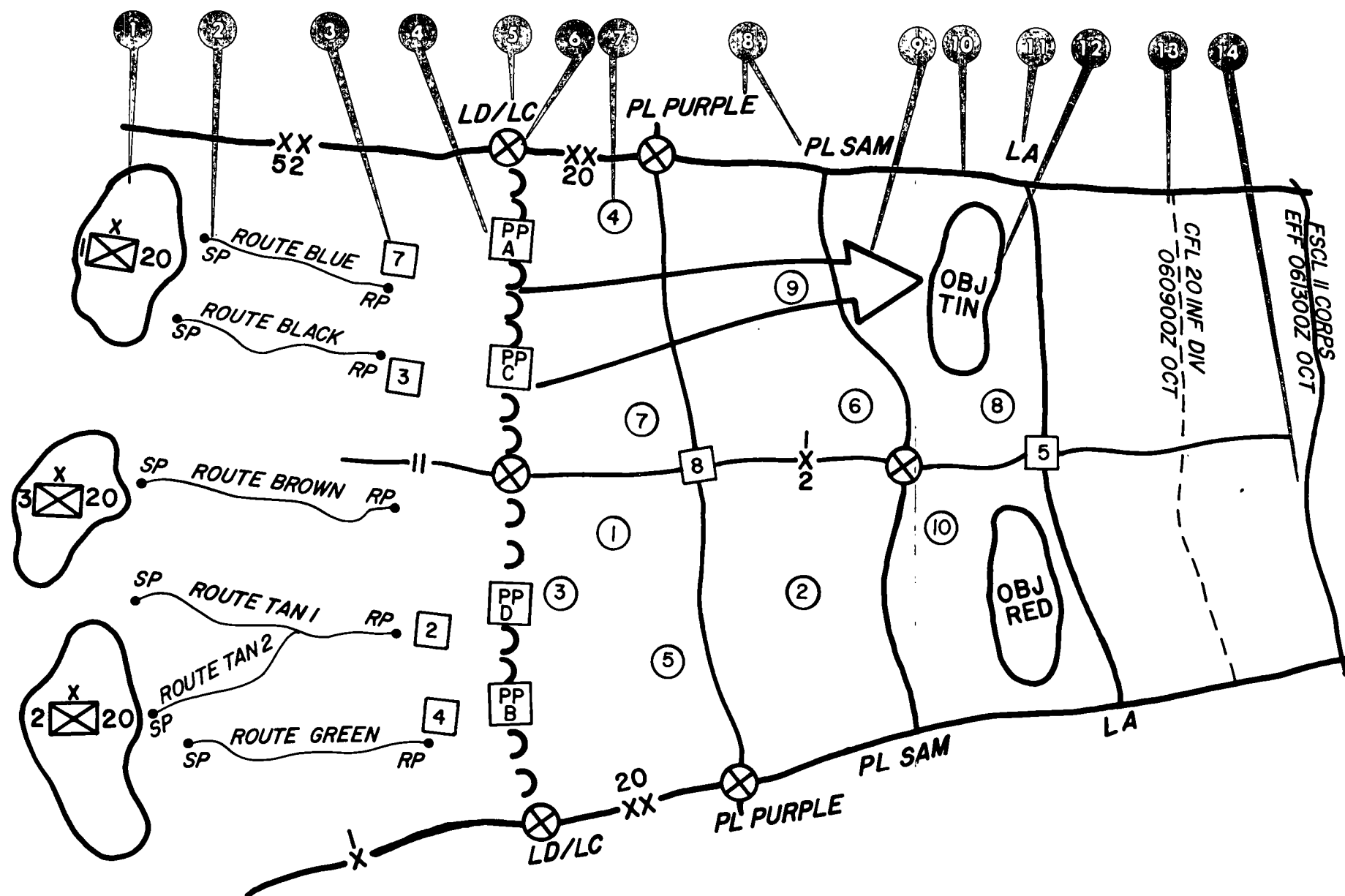
11 **Limits of advance** are set by the commander to keep control and prevent his assaulting elements from being hit by friendly fires.

12 **Objectives** are usually assigned in an attack. They may be the only control measures assigned and are used to focus the efforts of attacking units.

13 **Coordinated fire lines (CFL)** show the points beyond which field artillery, mortars, and naval gunfire ships may fire at any time within the zone of the establishing headquarters without additional coordination.

14 **Fire support coordination lines (FSCL)** are those lines forward of which all targets may be attacked by any weapon system without danger to or additional coordination with the establishing headquarters.

● **Zone of attack** (NATO term: zone of action) is an area delineated by boundaries extending forward into enemy territory. Units may fire and maneuver anywhere within their assigned boundaries but may not do so in adjacent zones without first coordinating with the unit occupying the zone.





CHAPTER 5

Defensive Operations

Infantry normally defends where terrain restricts mobility, forces the attacker to move along narrow avenues of approach, and generally requires the attacker to fight dismounted. While armored and mechanized units fight an active defense—occupying, vacating, and reoccupying positions as necessary—the infantry fights a position defense.

CONCEPT OF THE DEFENSE

A position defense is organized around the infantryman and his weapons. Relatively fixed positions, suitable for occupation by infantrymen, are selected based on good fields of fire and natural cover and concealment, and are occupied prior to an enemy attack. Positions may be arranged linearly or in depth as described later in this chapter. Once battle is joined, little

movement between positions occurs. Infantry rarely defends along avenues of approach which favor mounted forces. Such avenues of approach are defended by heavy forces fighting an active defense that maximizes their mobility and firepower. Active defense operations are described in FM 71—100, **Armored and Mechanized Division Operations**. If, for some reason, it is

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necessary to employ infantry against mounted forces, the defense should be organized on terrain which severely restricts mobility, forcing the enemy to fight dismounted.

Since defenders have the advantage of selecting the ground on which to fight, they should take the opportunity to prepare the battlefield by reinforcing the terrain.

Terrain reinforcement must begin with an analysis of the operational area to identify avenues of approach and existing obstacles. The terrain is evaluated to determine its natural canalizing effects in order to make maximum use of available manmade obstacles. Emphasis is placed on impeding enemy mobility by canalizing enemy forces away from cover and concealment and into open areas covered by multiple overwatching weapons.

Obstacle planning must be conducted concurrently with the organization of the ground to insure that each reinforcing obstacle is fully integrated into the

defending unit's tactical plan. Reinforcing obstacles should be sited where they enhance existing obstacles or other reinforcing obstacles. As obstacles are only marginally effective when not covered by direct fire, obstacle and tactical planners must insure that overwatching positions are available for all obstacles. This integrated planning process is accomplished by the tactical commander, his engineer, and his fire support and air support coordinators jointly developing the tactical plan with its supporting obstacle plan. Because time, manpower, and material will be critical on the battlefield, commanders must insure that each reinforcing obstacle is fully integrated into and complements the tactical plan.

Fighting positions must be prepared for the major weapon systems to increase their survivability on the battlefield. Multiple positions must be prepared to allow the weapons to move after firing to reduce the suppressive effects of enemy fire. Camouflage must also be stressed in defensive operations to hide the location of the defending elements.

The division conducts defensive operations alone or as a part of a corps to:

- | | |
|---|---|
| ● Cause an Enemy Attack to Fail. | ● Gain Time. |
| ● Control Essential Terrain. | ● Concentrate Forces Elsewhere. |
| ● Preserve Forces, Facilities, Installations, and Activities. | ● Wear Down Enemy Forces as a Prelude to Offensive Operations. |
| ● Retain Tactical, Strategic, or Political Objectives. | ● Force the Enemy to Mass so That he is More Vulnerable to Firepower. |

FUNDAMENTALS OF DEFENSIVE OPERATIONS

Regardless of why the defense is undertaken or how the defense is organized, there are certain fundamentals that guide commanders in preparing for defen-

sive operations. These fundamentals are common to all levels of command though their application may vary at each level.

—Understand the Enemy—

Commanders must be thoroughly familiar with the capabilities and limitations of enemy weapons and equipment. They must know how enemy units are organized, how the enemy organizes for combat and deploys, and how the enemy fights—in other words, the echelonment and tactics of enemy units.

For maneuver battalion and company commanders, the battle is oriented around their direct fire weapon systems and support by other members of the combined arms team. While this is important to the division commander, he must also concern himself with how the enemy employs divisional and

army second-echelon forces, because these forces provide the indications of where the main effort is being made.

As in offensive operations, the division commander and his staff must also have a sound understanding of where enemy field and air defense artillery, combat service support, and critical command control facilities can be found. These are the systems the division must destroy so that maneuver and artillery battalions, attack helicopter units, and offensive air support can operate successfully against enemy tactical formations.

—See the Battlefield—

Prior to the battle, the defending commander must organize to defeat different types of likely attack from several feasible directions. He must then undertake aggressive operations to learn where the enemy is, how he is organized, which way he is moving, what his intentions are, and what his strength is. As the battle unfolds, he must seek to establish a continuous flow of information and must deny the enemy similar information about his own forces while preparing to counter the enemy.

One must remember that battalion commanders can seldom see beyond terrain features to their immediate front. The

division commander normally has collection means available that can locate the enemy farther away. Radio nets can be monitored, electronic emitters can be identified, and often enemy movements can be followed. Once acquired, the critical combat information must be passed directly to commanders who are in the best position to make use of the information. However, despite his best efforts to collect information, the division commander will almost always have to make decisions based on incomplete information. Therefore, the more he knows about enemy weapons and supporting systems, tactics, and psychology, and the more he has studied the terrain, the better his decision will be.

— Concentrate at Critical Time and Place —

The division commander must decide when and where he will concentrate his forces. He must also decide how much force will be required to defeat the enemy within the terrain and space limitations of the defensive area. He must do this based on the results of his combat information and intelligence-gathering operations. For infantry, this information is particularly important. It must be timely, and, most of all, it must be accurate since infantry is concentrated before battle is joined and cannot move about the battlefield like mounted forces do to rectify mistakes or to concentrate elsewhere.

When forces are concentrated, others must be economized, often on the flanks. Air cavalry and ground cavalry are excellent

units to cover ground where it is necessary to economize forces. Such forces can be rapidly reinforced by attack helicopter units and shifting fires of field artillery should the need arise. Field artillery fires can often be concentrated without moving batteries.

As a general rule, mechanized and armored forces operate initially in front of the main body to provide security for the deployment of the division. When these covering force operations are terminated, some mechanized and tank platoons join forward brigades if the terrain permits. However, some mechanized and tank-heavy forces are generally withheld until the location of the enemy's effort is known. These forces can then move as rapidly as terrain will permit to reinforce the most threatened brigade.

— Fight as a Combined Arms Team —

The commander must see that the right weapon systems are in the right part of the battlefield at the right time. He must tailor his forces to optimize the effectiveness of each weapon system by complementing its special capabilities with those of other weapon systems. This brings the maximum amount of force to bear on the enemy at the right place while simultaneously degrading the enemy's capability to effectively use his weapon systems. Engineers support by constructing obstacles and minefields to slow the enemy and by improving roads and

bridges to increase friendly mobility. Field artillery and mortars extend the destructive range of the infantry defender through the delivery of massive fires to confuse, separate, and destroy the attacking force. Air defense weapons destroy attacking enemy aircraft. Tactical aircraft attack targets which are difficult to destroy, concentrations of enemy forces, and targets beyond the range of ground weapons. They, too, operate to protect defending forces from enemy airstrikes.

— Exploit the Advantages of the Defender —

When given time, the defender has a number of advantages which allow him to defeat an attacking force much larger than his own. The defender analyzes the terrain in detail from all perspectives and is intimately familiar with every feature which could increase his chance of success. The

attacker must feel his way over the terrain, seeing each new compartment for the first time. The defender can prepare positions, construct obstacles, plan fires, and conceal his efforts in advance. The attacker must guess where the defender is located. The

defender initiates the fight from stationary positions which are difficult to detect and which provide cover from enemy fire. The attacker must react to the defender and must either fire while moving or lose momentum by seeking covered positions. The defender develops flexible plans for control of fire, movement, communication,

and logistics to fit any predictable situation. The attacker must adhere to a predetermined scheme which risks destruction, or he must alter his plan and risk an uncoordinated effort.

When the time is right, the defender counterattacks against attacking enemy

units. The purpose of counterattacking is to regain critical terrain or to destroy attacking units. Counterattacks are initiated only when the probability of success is high and the defender is not exposed to unacceptable losses. Care must be exercised to avoid a maneuver which increases the defender's vulnerability.

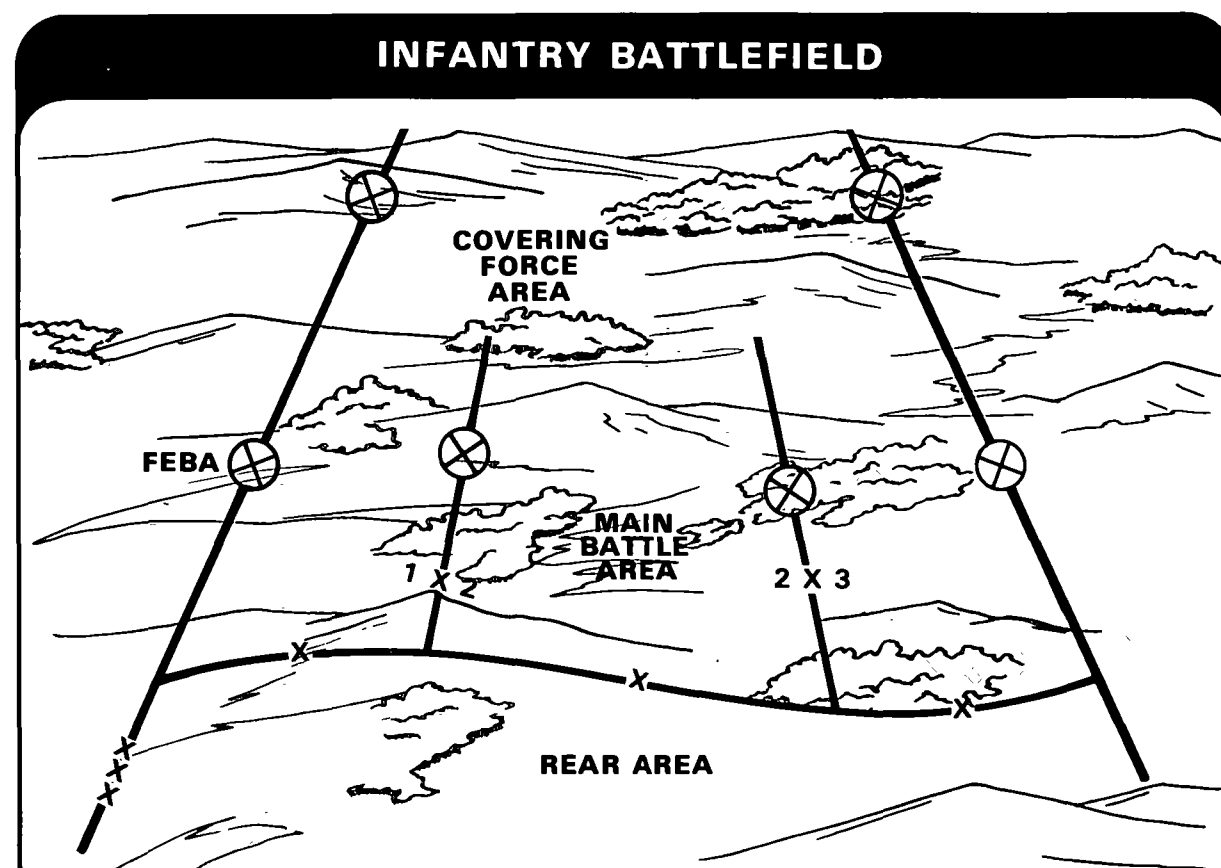
ORGANIZATION OF THE DEFENSIVE BATTLEFIELD

Organizing the Defense

The division commander is usually told by the corps commander where and when he will defend. He is given an area in which to operate. The defense should be planned in as much detail as time and resources permit. The battlefield is normally organized into three areas:

- Covering force area.
- Main battle area.
- Rear Area.

COVERING FORCE AREA. The covering force area (CFA) begins at the line of contact and extends rearward to the forward edge of the main battle area. Divisional forces operate in this area to provide early warning of enemy attack; furnish information about the enemy's disposition; gain time for the division to prepare its defense; and delay, disorganize, and deceive the enemy as to the location of the main battle area (MBA). Brigades may employ security forces 2-4 kilometers forward of the MBA in the CFA.



As the enemy attacks, the covering force engages him with long-range direct and indirect fires to slow his advance. As the enemy advances, the covering force disengages, moves to positions located to the rear, and engages the enemy again while retaining its freedom to maneuver. Because of their limited mobility, firepower, and armor protection, covering forces provided by infantry divisions delay in the CFA, rather than fight a major defensive battle.

Once in the MBA, units previously assigned to the covering force may be attached to brigades or continue to operate under division control as the division reserve. Brigade security forces then pick up the enemy, engage him as necessary to continue to slow his progress while maintaining visual contact and retaining freedom to maneuver. When the battle is joined by forces in the MBA, brigade security forces pass into the MBA. Here they rejoin their battalions or operate under brigade control as the brigade reserve.

A corps organized primarily with armored and mechanized divisions will generally deploy a covering force forward of the main battle area. A covering force is organized with sufficient combat and combat support units to fight a major battle. It must engage the enemy with such intensity as to cause him to deploy and reveal the location of the main attack. An infantry division operating with such a corps may be required to provide tank or mechanized forces or sometimes air cavalry for the corps covering force. Infrequently, and under circumstances just described, the division may be instructed by the corps to deploy a divisional covering force for the purpose of forcing the enemy to reveal the location of his main attack. In such instances, the division should expect to receive additional mounted force from the corps. Covering

force operations are further described in FM 71-100, **Armored and Mechanized Division Operations**.

MAIN BATTLE AREA. The decisive battle is fought in the MBA. The MBA is bounded by the forward edge of the main battle area (FEBA) and rear boundaries of forward brigades. The commander concentrates his forces along the avenue of approach where he believes the enemy's main effort will be made. Minefields and other obstacles are employed forward of the MBA and are covered by fire.

Whether the enemy is mounted or dismounted, sufficient fires must be concentrated to cause enough enemy casualties and destroy enough of the enemy's equipment to convince him that continuation of the attack will be too costly and that he must break it off. As the enemy closes on the MBA, he is first engaged by field artillery, attack helicopters, and close air support aircraft. Mortars are next to join the fight; then the machineguns and small arms are employed by infantry from dug-in, well-prepared foxholes.

An attacker mounted in tanks or infantry fighting vehicles may first be engaged by attack helicopters armed with antitank guided missiles (ATGM's), and sometimes by close air support aircraft. Field artillery is used to keep tanks buttoned up, and field artillery-delivered family of scatterable mines (FASCAM) is fired to force infantry to dismount from their fighting vehicles. As the enemy moves toward the MBA, tanks engage with main guns, and infantry engages with TOWs and Dragons. At close ranges, LAW is used.

If forward defenses are penetrated, counterattacks are conducted using intense fires and limited maneuver to destroy enemy forces in the penetration, to regain terrain, or to eject the enemy. The infantry

division normally keeps the preponderance of its forces forward, retaining a small reserve of one or two battalions. The reserve is normally employed by attaching it to the brigade whose sector is most threatened. Often the reserve is tank and mechanized heavy since mounted forces can normally be moved more quickly to the point where they are needed. However, in very close terrain, the reserve may be infantry heavy or even infantry pure.

Under some circumstances, when the division is spread across a wide front, it may not be wise to withhold a reserve. In this event, a brigade or brigades may be told to commit a certain unit (or units) only with the approval of the division commander. This unit (or units) then becomes, in effect, the division reserve.

REAR AREA. The division rear area begins at the brigade rear boundaries. It extends rearward to the division rear boundary, normally designated by corps. The division main command post and some combat service support units are usually located here. Division and sometimes corps reserves, when organized, may also locate here. Divisional reserves, however, are usually positioned in brigade sectors along the avenue of approach where they are most likely to be employed.

Combat units are not normally available for rear area security. Installations are concealed, dispersed, and readied for rapid displacement to avoid enemy attacks. Should enemy forces move into the division rear area, combat service support units may have to fight to protect their installations. The division commander may use the divisional military police company to assist in combat operations in the rear area. Should enemy forces operating in the division rear area become strong enough to threaten the integrity of the defense, several actions can be taken.

- Divisional air cavalry and attack helicopters can move rapidly to reinforce military police or other units fighting in the rear area.

- Close air support aircraft can be called upon to attack rear area targets.

- Reinforcement, most often air cavalry or attack helicopter units, can be requested from corps.

- Least committed or uncommitted units can be moved to operate in the rear area. This should only be done under unusual circumstances since forward defenses could be weakened to such an extent that the defense would crumble.

PREPARING FOR DEFENSIVE OPERATIONS.

The division prepares for defensive operations generally as described in chapter 3. The commander estimates the situation, and appropriate estimates are provided by the staff. Terrain over which the battle is expected to be fought must be thoroughly studied. Personal reconnaissance is essential. All avenues of approach into the division area are identified. Terrain which

can slow or block lateral and forward movement is also identified. Once avenues of approach have been determined, it is necessary to determine the number of battalions required to defeat enemy forces that can be employed along each avenue of approach. If insufficient forces are available for each avenue of approach, it will be necessary to economize in some areas as

previously described. Thus, the commander describes what is to be done and sets forth his concept of the operation.

The commander should describe his concept of the operation in the detail necessary for his staff and subordinate commanders to understand precisely what he intends with regard to fighting the battle. As a minimum, it is necessary to prescribe:

- Where the defense is to be conducted.

Organizing Covering Forces

Allocation of forces to the covering force is based on the commander's intent. If he intends to begin his defense in the covering force area or delay the enemy, the force is strong and may include the tank and mechanized battalions. If the intent is to provide only security and early warning of the enemy approach, the force is lighter. On close terrain the force is dismounted; on mixed terrain the tank and mechanized battalions are employed and cross-attached to form task forces and teams. A divisional covering force operates up to 10-15 kilometers forward of the main battle area. It is most often controlled by an assistant division commander operating from a small mobile command post. The divisional security force should include representative calibers of field artillery; for example, a battalion of light artillery, and perhaps one battery of medium and a platoon of heavy artillery. Some air defense gun units should operate with units in the covering force, particularly where bridges must be protected. Where there are bridges across water obstacles, engineers should be

- Covering forces to be deployed forward of the main body, what they are to do, when they are to be in position, and how they are to be controlled. When it is necessary to hold the enemy forward of the main battle area for a specific time to provide for preparation of the main battle area, the division commander must specify how much time he needs.

- Task organization of the main battle area forces, where they are to fight, when they are to be in position, and how they are to be controlled.

employed with the covering force. Once covering forces have no further need for bridges, combat engineers can destroy them with demolitions. Combat engineers may also be used to emplace mines along avenues of approach in the covering force area since combat forces may have little time to do this.

The covering force may be employed either in depth or linearly. They are employed in depth when tank and mechanized forces are used and provide for continuous security as the enemy approaches the MBA. When dismounted, the covering force normally is disposed linearly. As the covering force moves within 2-4 kilometers of the MBA, the brigades assume control of the forces forward of their sectors and continue to perform the mission. As forces enter the MBA, they conduct a passage of lines and may be used to reinforce MBA forces as a reserve, or in rear area combat operations if such operations are necessary.

Organizing Main Battle Area Forces

If strong defensive terrain is located well forward in the MBA, or the mission does not permit acceptance of a penetration, the division commander organizes his forces linearly along the forward edge of the main battle area. The bulk of his forces are located forward in positions selected to maximize weapon effectiveness and to be mutually supportive. Such a defense reduces the possibility of enemy penetration and favors retention or control of terrain. The most likely avenue of enemy approach is weighted with maneuver forces and with fire support. A linear deployment is appropriate when:

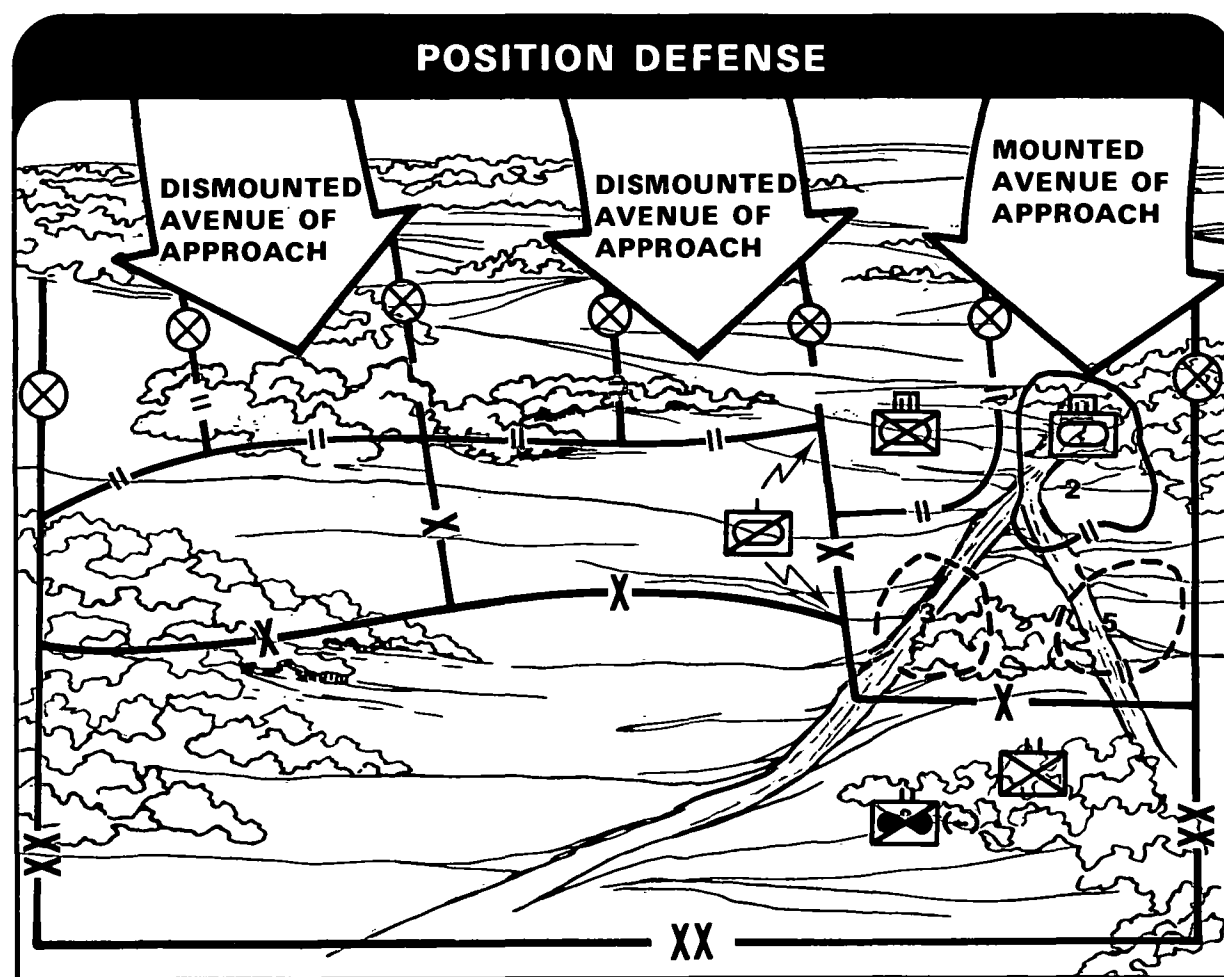
- Specific terrain along the FEBA must be retained.
- Avenues of enemy approach favor attack by dismounted forces.
- The terrain accommodates a defense well forward.
- The defensive sector is relatively wide.

Battalions deployed linearly are infantry heavy or infantry pure. Some tank and mechanized platoons, or even a company, may be provided to a brigade deployed linearly. When there is no threat of mounted attack, the reserve also is generally infantry heavy or infantry pure. When this is the case, the reserve may move by helicopters to reinforce forward battalions.

Except in jungles, extremely dense forests, or mountains, infantry division sectors will often contain some avenues of approach usable by mounted forces. While

such approaches are usually narrow and not suitable for large forces, these approaches can pose a threat to the continuity of the defense. If mounted forces penetrate, adjacent units of the division and adjacent divisions become vulnerable to attacks from the flank or rear. These approaches cannot be defended by infantry forces in a linear array. Such an array can be easily bypassed by mounted forces. The mounted attacker can also mass his forces against one point of the linear defense, moving his attacking elements past the defender faster than foot-mobile infantry can react. Here the division must array its forces in depth.

When it is necessary to defend along a mounted avenue of approach, it is best to use the division tank battalion and mechanized battalion as depicted. They are normally organized into two cross-attached battalion task forces placed under the control of a brigade headquarters. It would be normal to find the battalion task forces, in turn, organized into tank and mechanized company teams. The battalion task forces may fight an active defense as described in FM 71-2, *The Tank and Mechanized Infantry Battalion Task Force*, or in FM 71-3, *Armored and Mechanized Brigade Operations*.



If, for some reason, sufficient tank and mechanized forces are not available, or the avenue of approach is so narrow as to support a battalion or less, then infantry battalions may be used. When this is the case, infantry battalions are positioned in depth in mutually supporting battle positions which offer good cover and concealment and long-range fields of fire. If mounted forces attack, they are brought under increasing fire from artillery, CAS, TOWs, Dragons, and then from LAWs. As a general rule, the number of defending battalions is determined by the avenue of approach and the size force that can use it.

In any case, particular attention should be paid to the flanks of infantry forces defending adjacent to mounted avenues of approach. Since forces defending against a mounted attack fight the battle in depth, cavalry—air or ground—or perhaps battalion scouts should be used to screen the flanks of the infantry defender. Their purpose is to provide early warning if mounted forces should threaten from the flank. If it is necessary to block, infantry forces can conduct an airmobile operation in the area to occupy blocking positions.

STRONGPOINTS. In a particular case, the division commander may direct that a strongpoint be prepared, usually by a battalion.

The strongpoint is essentially an anti-tank "nest" which cannot be quickly overrun or bypassed by tanks, and which can be reduced by enemy infantry only with the expenditure of much time and overwhelming forces. A strongpoint is located on a terrain feature which is critical to the defense, or one which must be denied

to the enemy. It is the cork in a bottleneck formed by terrain, obstacles, and units.

A strongpoint position should be fortified as extensively as time and materials permit. All weapons should be dug in with overhead cover in primary and alternate positions. Communications trenches and wire lines should be installed to permit control of forces and some movement of weapons under fire. Indirect supporting fires should be planned in detail.

A strongpoint is not routinely established. It is established only after the commander determines that a strongpoint is absolutely necessary to slow the enemy or prevent a penetration of his defensive system. The decision to do so must be carefully weighed.

DECISION CONSIDERATIONS

- Considerable time, barrier material, and engineer support are necessary to develop an effective strongpoint.
- The force that establishes the strongpoint may become isolated or lost.
- The force that establishes the strongpoint loses its freedom to maneuver outside the strongpoint.
- The force that establishes the strongpoint must be given sufficient time and support to build the position.

Field Artillery

A light divisional field artillery battalion is placed in direct support of each brigade. The composite medium-heavy battalion is normally kept in general support of the division. Any field artillery units provided by corps may be used to reinforce direct support artillery, employed as general support reinforcing artillery, or retained in general support.

Counterfire operations are controlled by the division artillery commander. As a

general rule, there will be insufficient field artillery to respond immediately to all battalion task force requirements and meet counterfire requirements at the same time. Therefore, the division commander sets priorities for distribution of field artillery fires to guide the division artillery commander. Offensive air support aircraft are also effective counterfire weapon systems and should be integrated into counterfire operations to the extent of their availability.

Air Defense

Generally, the division has insufficient air defense artillery to cover the entire division. Air defense units must therefore be allocated in accordance with the division commander's priorities. Dedicated support

should be provided to critical installations such as command posts, combat service support areas, reserves, and field artillery battalions.

Engineer

Divisional engineer units concentrate their efforts forward in support of brigades. Reinforcing obstacles are emplaced to reinforce existing terrain, thus strengthening the defense. Slowing the enemy's rate of advance in order to engage him is particularly important. Engineers also assist combat units in the preparation of fighting positions and routes to provide for lateral

movement by the defender and to close routes that are no longer needed.

Some corps engineer units operate in support of the division. Corps engineers should be used to maintain lines of communication and to provide other necessary engineer support throughout the division area.

Combat Electronic Warfare Intelligence Battalion

The combat electronic warfare intelligence battalion (CEWI) operates to locate enemy electronic command and weapon control systems. Collection and jamming platoons, prisoner of war (PW) interrogation sections, remote sensor squads, and ground surveillance radars operate forward with brigades. Airborne

monitors stand off farther to the rear. Electronic support means are concentrated to locate enemy field artillery and regimental headquarters. Location of enemy air defense weapons is also important so that they can be suppressed to allow attack helicopters and close air support aircraft to operate.

Control Measures

In order to control the forces involved in tactical operations, it will be necessary for the commander to use operational terms and graphics to show his subordinate commanders what he wants them to do. Some of the more frequently used control measures which are found in defensive operations are described below. FM 101-5-1, **Operational Terms and Graphics**, contains additional information about control measures.

- 1 **Assembly area.** An area in which a force prepares for or regroups for further action.
- 2 **Release point.** A release point (RP) is a clearly defined control point on a route on which specified elements of a column of ground vehicles or flight of aircraft revert to their respective commanders, with each element continuing movement toward its own appropriate destination.
- 3 **Route of march.** A route of march is the prescribed course to be traveled from a specific point of origin to a specific destination. A route of march is usually designated with a start point (SP) and a release point, and is labeled with a route name.
- 4 **Start point.** A clearly defined initial control point on a route at which specified elements of a column of ground vehicles or flight of aircraft come under the control of the commander having responsibility for the movement.
- 5 **Checkpoint.** A predetermined point used as a means of controlling movement. Checkpoints are not used as reference points in reporting enemy locations.
- 6 **Sector.** A defensive area designated by boundaries within which a unit operates and for which it is responsible.

7 **Phase line.** A line used for the control and coordination of military operations, especially forward or rearward progress within a zone or sector. It extends across the zone or sector from boundary to boundary and should be located on easily recognizable terrain. A phase line may sometimes be designated as a report line.

8 **Contact point.** A designated, easily identified point on the terrain where two or more units are required to make physical contact.

9 **Boundary.** A control measure used to delineate areas of tactical responsibility for subordinate units. Within their boundaries, units may fire and maneuver in accordance with the overall plan without close coordination with neighboring units, unless otherwise restricted. Direct fire may be placed across boundaries on clearly identified enemy targets without prior coordination as long as friendly forces are not endangered. Lateral boundaries are generally used to control tactical operations at division and corps. Below division level, lateral boundaries may be used when required to control fires and assign responsibility for areas. Rear boundaries may be established in the defense to facilitate command and control. A battle area constitutes a boundary and may be the only boundary delineated at brigade level, with brigade support areas and division support areas designated in or to the rear of brigade battle areas.

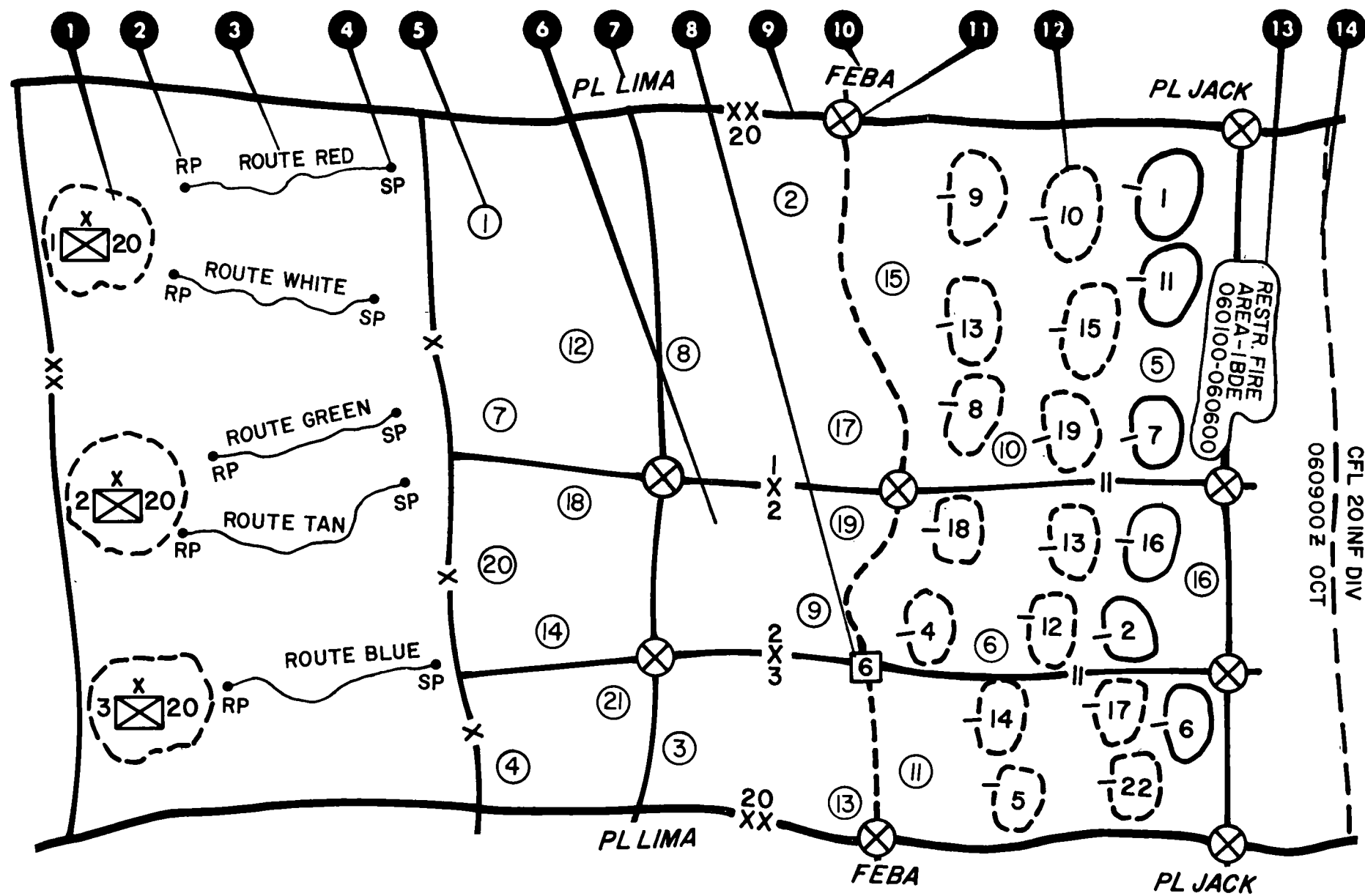
10 **Forward edge of the battle area (FEBA).** The forward limit of the main battle area. It excludes the covering force area/security force area and is designated to coordinate fire support, the positioning of forces, or the maneuver of units.

11 **Coordinating point.** A control measure that indicates a specific location for coordinating fires and maneuver between adjacent units. Coordinating points are indicated where a boundary crosses the FEBA and should be indicated where a boundary crosses report lines or phase lines used to control security forces.

12 **Battle position.** A battle position (BP) is a defensive location from which a unit will fight. Assigned missions could include defend or attack. Commanders of brigades and lower units normally assign battle positions to subordinate commanders. A unit assigned a battle position is located within the general outline of the position. Some security forces may operate outside battle position boundaries for early detection of the enemy and for all-around security.

13 **Restrictive fire area.** A restrictive fire area (RFA) is an area in which specific restrictions are imposed and into which fires in excess of those restrictions will not be delivered without prior coordination with the establishing headquarters. A restrictive fire area may be established at battalion and higher headquarters. It is generally located on identifiable terrain to facilitate recognition from the air and is normally shown in red on overlays.

14 **Coordinated fire line (NATO term: no fire line).** A coordinated fire line (CFL) is a line beyond which all surface-to-surface fire support means (mortars, field artillery, and naval gunfire) may fire at any time within the zone of the establishing headquarters without additional coordination. The purpose of the CFL is to expedite attack of targets beyond it.



MOBILITY, COUNTERMOBILITY, SMOKE, AND LIMITED VISIBILITY OPERATIONS

Mobility Operations

In the defense, the majority of engineer effort is devoted to countermobility operations. However, it is necessary to

expend as much effort as time and resources permit to open and maintain routes for rapid movement by divisional forces from

one battle position to another, and to provide for supply, maintenance, recovery, and evacuation operations.

Countermobility Operations

Obstacles are used to decrease enemy mobility without hindering friendly maneuver. Obstacles can divert enemy forces from covered avenues into open areas where direct fire weapons can be employed. In open areas, obstacles can extend the amount of time enemy units are exposed to friendly fire.

Existing antitank obstacles consist of:

- Mountains, terrain, and slopes with a gradient of more than 60 percent.
- Escarpments (for example, railroad tracks or highways on a steep fill more than 1½ meters high).
- Ravines, gullies, or ditches more than 5 meters wide.
- Rivers, streams, or canals more than 150 meters wide and 1½ meters deep.
- Swamps and marshes more than 1 meter deep.
- Forests or jungles with trees 8 inches in diameter, or 20 percent slopes with trees as small as 4 inches in diameter. (Tree stumps 18 inches high are obstacles.)

- Snow more than 1 meter deep.

- Built-up areas.

Reinforcing obstacles consist of:

- Antitank obstacles. Log obstacles—hurdles, cribs, posts and abatis, concrete and steel obstacles, tetrahedrons, hedgehogs and falling block obstacles, and ditches are effective antitank obstacles. They should be sited to take advantage of trees, brush, or folds in the ground.

- Wire obstacles. Wire entanglements are designed to impede the movement of foot troops and, in some cases, tracked and wheeled vehicles.

- Minefields. There are several types of minefields such as hasty protective, deliberate protective, tactical, and phony. **FM 90-7, Obstacles**, contains additional information concerning minefields.

The following principles guide employment of obstacles during defensive operations:

- Obstacles are sited to increase the time enemy weapon systems will be exposed to fire from divisional weapon systems.

- Obstacles should be employed in depth, one behind the other, along and astride avenues of approach every 200 to 500 meters. Obstacles must be far enough apart that each requires the enemy to redeploy his breaching equipment.

- Reinforcing obstacles are sited to tie together, strengthen, and extend existing obstacles. Reinforcing and existing obstacles, when tied together, should be more difficult to bypass than to breach.

- Obstacles should be covered by observation, direct fire, indirect fire, and remote sensors when possible.

- Reinforcing obstacles should be camouflaged and concealed from the enemy when practicable, or employed in such a way as to surprise the enemy.

- Concealed lanes and gaps through obstacles are provided when required so that friendly units may move through the system. It is necessary to insure that lanes or gaps can be blocked quickly. They should be covered by fire to preclude the possibility of the enemy rushing through before they can be closed.

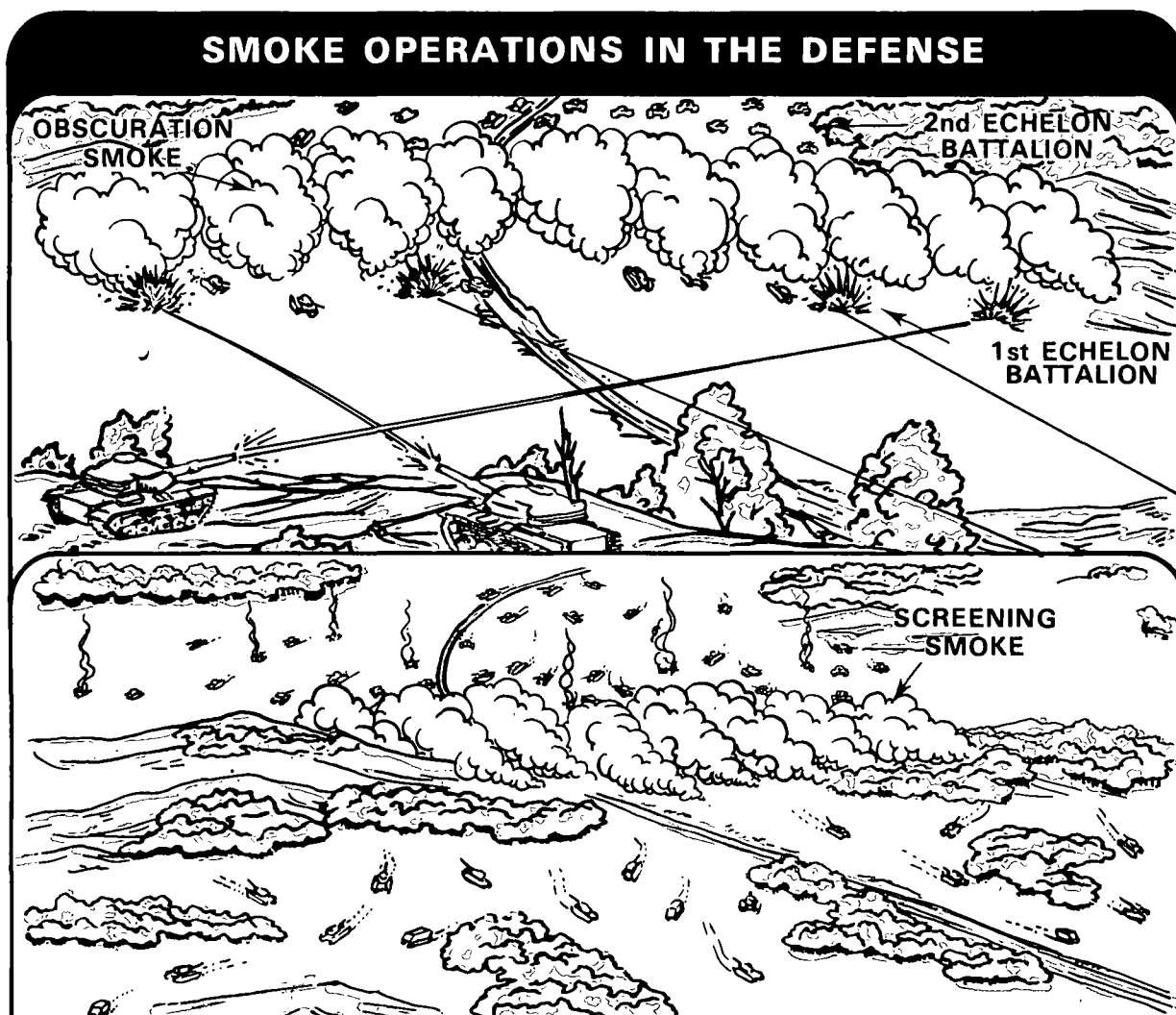
Employment of obstacles is described in detail in **FM 90-7, Obstacles**.

Smoke Operations

During defensive operations, obscuration smoke placed on or very near enemy positions is used primarily to obscure enemy overwatch positions and avenues of approach advantageous to the enemy, and to canalize or slow the enemy advance. This provides more time for engagement of enemy combat vehicles as they appear. Obscuration smoke is often used by the division between enemy first- and second-

echelon battalions to conceal engagements of first-echelon forces by divisional units. Care must be taken not to degrade friendly long-range fires.

Screening smoke is also used to aid disengagement and to conceal friendly movements from enemy forces and aircraft. Defenders can move in relative security and engage an enemy who cannot see them.



--- Limited-Visibility Operations ---

In a daylight engagement, the enemy will usually return fire within seconds of being engaged. At night, the defender can fire for a much longer period before the enemy can identify the source and return effective fire.

As a general rule, defense at night is conducted as in the day by units equipped with modern night equipment. When not fully equipped with night sights and goggles for vehicle commanders, friendly units may have to rely on artificial illumination to see the enemy well enough to destroy him. Initial use of artificial illumination should be controlled at the highest practicable level to avoid premature disclosure of the defender's position.

During daylight hours, intervisibility is influenced by changing battlefield conditions. Weapons sited to take advantage of long-range fields of fire and observation during periods of good visibility may become ineffective when foggy, cloudy, hazy, or smoggy conditions exist. It is therefore necessary to be prepared to move weapons to higher or lower ground to escape the effects of limited visibility conditions. Ambush sites along roads in valley floors may be very effective under such conditions.

Since snow or heavy rain will degrade most optical aids to vision, it will generally be necessary for defenders to move closer to the avenues of approach that they are

guarding. Sensors may still be of value during rain or snow; also, radar can sometimes penetrate such precipitation.

Threat forces routinely continue daylight attacks into the night to maintain momentum. If a hasty attack is stopped, the enemy will conduct a deliberate attack. Threat forces normally move and engage targets using artificial illumination such as flares, searchlights, and infrared equipment. Enemy dependence on active illumination and active infrared systems can be an advantage to a defending force equipped with passive night vision equipment. With a full suit of passive gear, the defender must take every advantage of his enormous potential. This means light discipline must be strictly imposed.

Enemy dependence on active infrared night driving equipment results in slower movement and permits rapid acquisition by friendly night observation devices. Adjustment of artificial illumination causes maneuvering forces to pause. Either way, defenders have more time to react, concentrate, and engage.

Enemy infrared (IR) equipment is effective up to about 900 meters. Defenders can identify and engage targets well beyond this range, even in poor ambient light. Defenders can move from position to position in relative security and engage enemy targets which cannot see them.

OTHER DEFENSIVE OPERATIONS

—Relief in Place—

A relief in place is a combat operation in which all or part of a unit is replaced in a combat area by another unit. Normally, it is ordered when the unit to be relieved is defending. The relieving unit usually assumes the same responsibilities and generally deploys in the same configuration as the outgoing unit.

As soon as the commander receives the mission to relieve another division, he should move with members of his staff and key subordinate commanders to coordinate significant details of the operation with the outgoing division commander and his staff. If they have not already been specified in the order, the following details are of immediate concern to the commanders of both divisions:

- Concept of the integrated tactical cover and deception plan.
- Timing and movement of subordinate units to include route priorities.
- Sequence of relief, both laterally and in depth.
- Time or circumstances under which the incoming commander assumes full responsibility for the mission and sector.
- Traffic control.

Since both units are particularly vulnerable once the operation begins, every

effort is made to conceal the operation from the enemy. This may mean that the operation is conducted during reduced visibility. To deceive the enemy, normal activity should be continued. Particular attention should be paid to patterns of indirect fires, communications traffic, patrols, or aerial reconnaissance by the outgoing unit and any other activities which, if changed, might indicate to the enemy that relief is occurring.

It is desirable for incoming leaders at each level of command to reconnoiter new positions. However, it is usually necessary to limit the size of incoming unit reconnaissance parties to conceal the operation from the enemy.

Smooth transition can be assisted by such measures as:

- Guides for incoming units.
- Exchange of equipment to include crew-served weapons when authorized and appropriate.
- Transfer of fire support plans, target data, and barrier plans.
- Separate routes for movement in opposite directions.
- Common use of cargo-carrying vehicles.

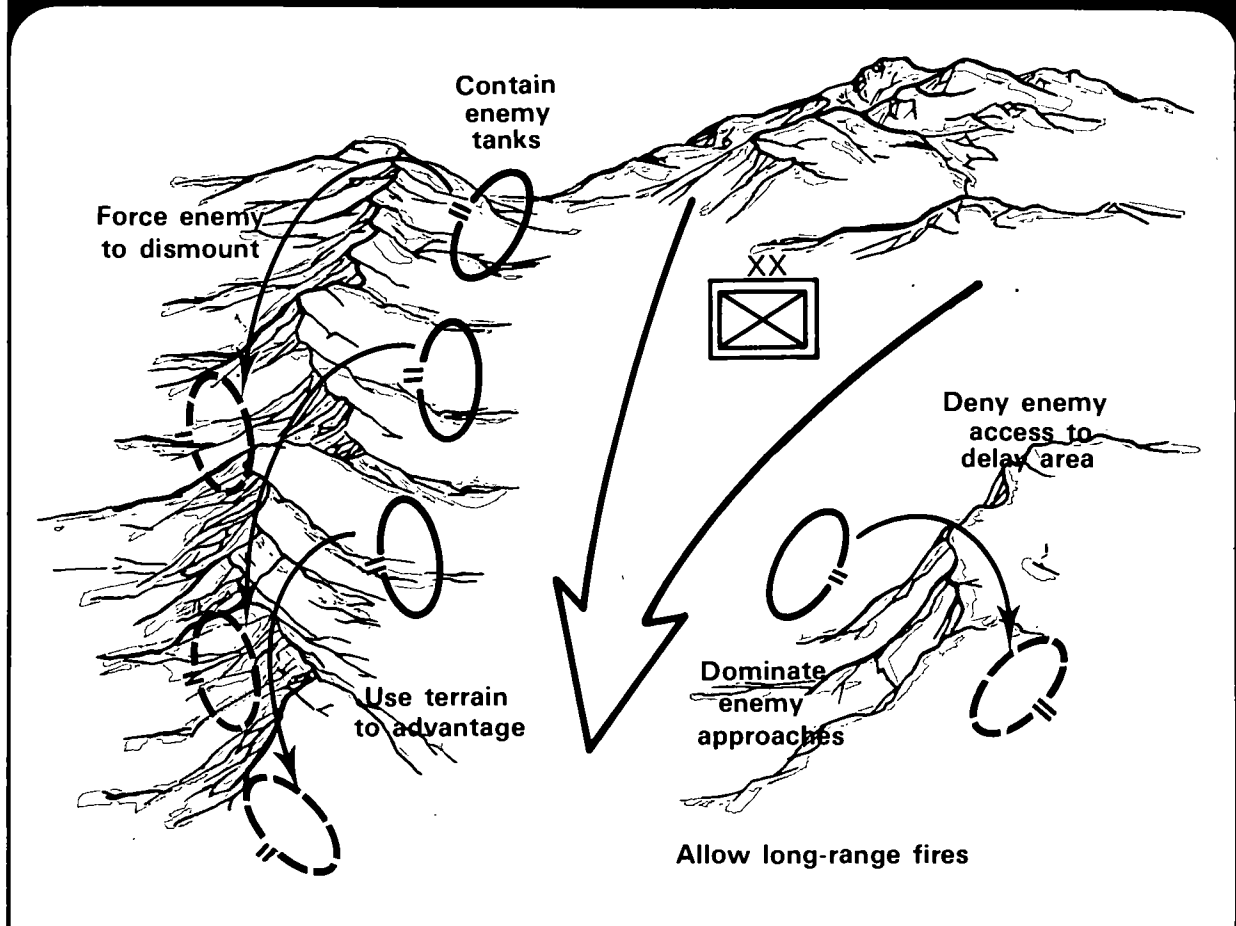
Delay Operations

Delay operations are normally conducted when there are insufficient forces to attack or defend, making it necessary to trade space for time. The purpose of the delay is to slow the enemy, often for a specified time. If forced to hold the enemy for extended periods, the commander risks decisive commitment and grave damage to his force. At each stage of the division's delay, there is an optimal combination of unit risk and delay time. The commander must seek this optimal condition in order to accomplish the delay mission without unacceptable losses of men and equipment.

The infantry division rarely delays against enemy mechanized or motorized formations in terrain which favors mounted operations. If a delay is attempted and the mobility and firepower advantages of the enemy cannot be overcome, the commander should establish a defense on terrain most favorable to his own forces and discontinue the delay.

When deployed independently in rugged terrain, the infantry division normally delays only when forced to move to the rear as a result of enemy pressure.

FACTORS INFLUENCING SELECTION OF DELAY POSITIONS



The delay trades maximum time for minimum terrain. The division may delay to:

- Cause the enemy to deploy and reveal his main attack objectives.
- Gain time for the concentration of forces elsewhere.
- Avoid destruction by attempting to defend against a vastly superior force.
- Realign forces on the battlefield while slowing the enemy advance and inflicting casualties.
- Draw the enemy into areas where he can be destroyed.

— Withdrawal Operations —

A withdrawal is an operation in which all or part of the force disengages from the enemy. Its purpose is to move a force out of an area in order to employ it elsewhere for another mission in another area. The commander disengages his force as quickly as possible with minimal casualties. Within the division, one or more brigades may withdraw while the remainder of the division delays or defends, or the whole division may withdraw.

A withdrawal may be conducted to:

- Draw the enemy into an unfavorable position by extending his lines of communication or by forcing him to fight on unfavorable terrain.

- Redeploy the division to another area.
- Refit the division for another mission.
- Conform to adjacent unit movements.
- Avoid battle under unfavorable circumstances.

The withdrawal is an orderly movement of the bulk of the division to new rearward positions without severe loss of combat

power. The repositioning of combat power from front to rear is accomplished in the following sequence:

- Infiltration of reconnaissance and work parties to the new area or position.

- Preparation of bridges for destruction and obstacles for impeding the advance of the enemy.

- Evacuation of casualties and unneeded equipment.

- Relocation of logistic support facilities.

- Positioning of traffic control elements along routes of withdrawal.

- Designation and positioning of a covering force.

- Disengagement of the main body.

- Occupation of new or intermediate positions by the main body.

- Delay by the covering force.

- Demolition of bridges and other obstacle-creating structures.

- Occupation of new or intermediate positions by covering forces.

- Preparation for subsequent missions.

The withdrawing division is organized into a main body and a covering force.

When the covering force is organized around units in contact, the withdrawing force disengages and moves away from the covering force. When the covering force is organized around units not in contact, the withdrawing force disengages and conducts a rearward passage of lines through the covering force. This must be done rapidly so that the covering force can take up the fight as quickly as possible.

The main body contains the bulk of the division's combat, combat support, and combat service support units. It must disengage quickly from the enemy, without incurring heavy losses or impairing unit integrity, and move rapidly to its new position.

Infantry units should withdraw during periods of reduced visibility. This permits the withdrawal to be initiated by stealth if units are not engaged when the withdrawal commences. Once the withdrawal is discovered, or if enemy pressure precludes disengagement by stealth, maximum use is made of smoke, suppressive fires, and terrain to obscure movement.

Elements of the main body move rapidly along multiple routes to new positions to the rear. These positions may be the final defensive positions of the division or may constitute interim positions in the division's withdrawal. Close contact is maintained with the covering force to

provide assistance, if necessary. All available transportation assets are used to speed infantry movement.

The covering force contains the more mobile elements of the withdrawing force. Its mission is to cover the movement of the main body as it disengages from the enemy. The covering force may be provided by corps or by the withdrawing division.

When corps provides the covering force, a division employs its mechanized, tank, and attack helicopter units to help forward units disengage from the enemy. Control of the covering force will generally remain with corps.

When the division covers its own withdrawal, tank and mechanized units can be part of the covering force, while attack helicopters assist disengagement of forward forces. When the forward brigades provide the covering force, the division commander designates an appropriate command and control headquarters to control the division covering force before the main body has disengaged.

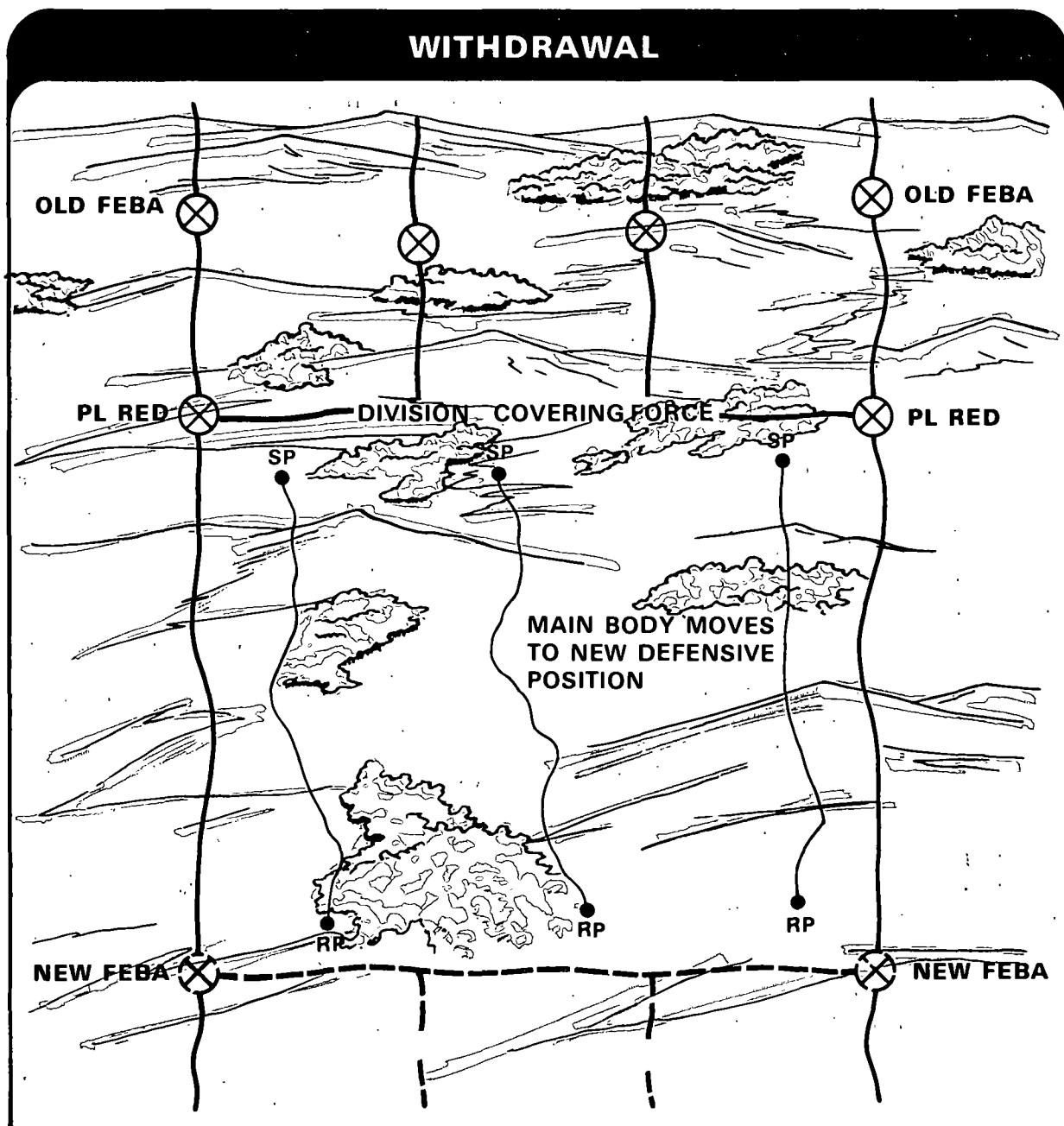
The exact size and composition of the covering force varies with terrain, enemy activity, and friendly forces. In addition to armor and mechanized forces, the covering force should contain infantry, engineers, artillery, aviation, air cavalry, and combat service support units to assist in covering the withdrawal of the main body.

The covering force controls critical chokepoints necessary for the withdrawal of the main body; occupies terrain that dominates enemy high-speed approaches; and counters enemy patrol activity, probes, or limited-objective attacks.

Elements of the covering force may be organized into a deception screen to convince the enemy that the division is still

occupying its positions. The screen accomplishes this by simulating the current strength, disposition, composition, activity, and communications system of the division. To minimize movement, the deception

screen is normally constituted from battalions and companies in contact, reinforced with the more mobile covering elements of the covering force.



The covering force provides a buffer between the enemy and the main body in the event of an enemy attack during the withdrawal. If the covering force is to remain in position to provide time for the main body to prepare and improve the rearward position, it will need substantial combat power to counter enemy attacks. If the covering force is to be withdrawn as soon as the main body has occupied new positions, it will normally be smaller and less able to defeat an enemy attack. These time considerations will be clearly transmitted in the commander's guidance to the covering force.

If the enemy attacks during the withdrawal, the commander can exercise one of several options:

- Order the covering force to defend until enemy pressure subsides to a level which allows the covering force to resume the delay. This presupposes that the division has not been told to continue to disengage to allow its rapid employment in another sector.

- Launch a limited counterattack with the covering force, augmented by portions of the main body, to throw the enemy off balance and to allow the bulk of the division to disengage.

- Delay to an intermediate position before starting a withdrawal. In this case, the division commander will organize his force to execute the delay as previously described.

- If more mobile forces threaten the survivability of the division, **discontinue the withdrawal and establish a division defense to preserve the force.**

Timing the withdrawal is particularly important. Contact must be broken and the division redeployed before the enemy reacts to the division's movement.

When the division is participating in a withdrawal as part of a larger force, the corps will decide when to initiate the withdrawal or when it must occupy the rearward position. If the division is executing the withdrawal, the division commander will decide.

CHAPTER 6

Combat Service Support

The division support command (DISCOM) is organized to provide a variety of combat service support to divisional units.

ORGANIZATION FOR COMBAT SERVICE SUPPORT OPERATIONS

Division Support Command

The most important functions of the DISCOM are to arm, fuel, fix, and man the weapon systems. It does this as far forward as the tactical situation permits in order to return inoperable weapon systems to the battle as quickly as possible. Before describing how these functions are accomplished, it is first necessary to describe how the DISCOM organizes for combat service support.

The DISCOM is organized with:

- A Headquarters and Headquarters Company to provide command and control.

- A Materiel Management Center to provide supply and maintenance management.

- A Supply and Transport (S&T) Battalion to provide and move supplies for the division.

- A Maintenance Battalion for recovery, repair, and evacuation of the division's equipment.

- A Medical Battalion to treat and evacuate wounded.

- An Adjutant General Company to provide personnel services—except financial services.

- A Finance Company to provide financial services for the division.

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A divisional brigade does not have combat service support units of its own, although it does have a personnel staff officer (S1) and logistics officer (S4) to plan and coordinate combat service support operations in support of the brigade. Combat service support is provided to the brigade by DISCOM units and by units

from the corps support command (COSCOM).

Combat, combat support, and combat service support units have some organic combat service support means of their own. The conduct of combat service support operations by these units is described in the appropriate unit manuals.

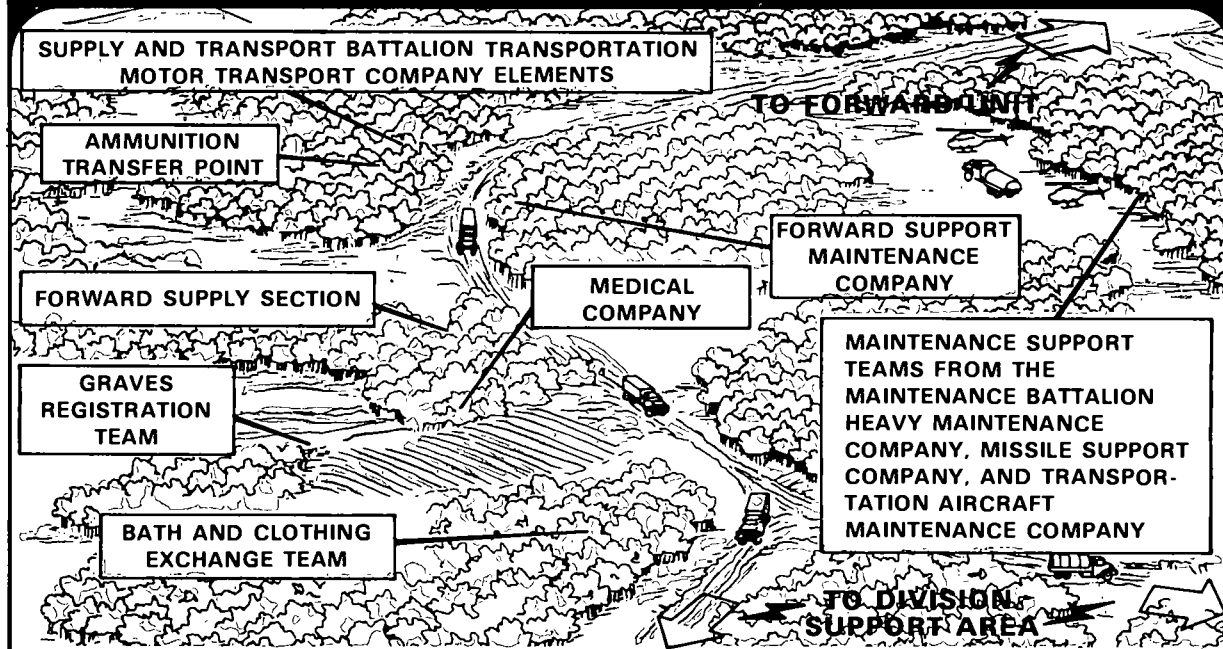
Brigade Trains

Any grouping of personnel, vehicles, and equipment put together to provide combat service support to a unit is called the unit trains. Brigade trains are organized around forward support elements provided by the DISCOM. The DISCOM commander, working with brigade S4s, forward area support coordinators, the division G4, and the DISCOM battalion commanders, tailors DISCOM forward support elements based on the operational requirements of each

brigade. Although the specific organization of each forward support element may vary with the supported brigade's mission, each element generally has:

- A forward support maintenance company.
- A forward supply section from the supply and transport battalion.
- A medical company.

A TYPICAL BRIGADE TRAINS



Other units which may operate with a forward element are:

- Maintenance support teams from the maintenance battalion heavy maintenance company, missile support company, and transportation aircraft maintenance company.

- Elements of the supply and transport battalion transportation motor transport company.

- Graves registration and bath and clothing exchange teams when provided by a nondivisional field service company.

- Ammunition transfer point from the supply and transport battalion.

Forward support elements operate from brigade support areas. Although some elements—for example, maintenance support teams—frequently operate with bat-

talion combat trains and forward companies, other DISCOM units are normally located in the division support area.

A forward area support coordinator (FASCO) located in each brigade support area supervises the operations of DISCOM forward support elements. He works with the brigade and battalion executive officers and S4s and DISCOM battalion commanders to see that brigade combat service support needs are met. DISCOM forward support elements may be placed under the operational control of the forward area support coordinator.

The remainder of this chapter describes division combat service support operations in general terms. **FM 54-2, The Division Support Command and Separate Brigade Support Battalion**, provides a detailed description of DISCOM organization and operations.

ARMING THE SYSTEMS

Weapon systems will be ineffective if they are not provided with enough ammunition to engage the required number of targets. The objective must be to provide

ammunition as far forward as possible to relieve the burden on the using units since they themselves will be limited in their ability to conduct normal resupply.

— Planning —

Planning is the key to successful ammunition resupply. Planning must include:

- **Basic loads.**
- **Required supply rate.**
- **Controlled supply rate.**
- **Movement capabilities.**
- **Shortfall solutions.**

A unit's **basic load** is that quantity of ammunition that must be on hand in a unit to sustain it until resupply can be accomplished.

The basic load is determined by corps or the major overseas commander. However, commanders at all levels must carefully analyze the directed basic load and recommend changes as required. Whenever possible, the basic load should be uploaded on organic transportation and ready for immediate

movement. When uploading is not possible, the basic load is stored in an area as close to the user as possible and under user control. Units that are not uploaded must establish and frequently exercise loading plans to reduce deployment time. Upload plans should be continually reviewed and revised.

The next planning step is the development of the **required supply rate (RSR)**. RSR development is the responsibility of the G3. Early in the planning process, a gross requirement may be necessary. Using the best information available, the G3 considers the concept of operation and the number and type of weapons to be armed. Ammunition planning factors in FM 101-10-1, Staff Officers' Field Manual—Organizational, Technical, and Logistic Data, or the Department of the Army-published expenditure rates are used as guidelines in developing gross requirements. Recent expenditure experience or studies are often used to validate or modify the gross requirements.

As planning progresses, the G3 issues directives to the brigade, battalion, and company for the development of required supply rates. These rates are determined at the fighting position for each weapon and include a detailed analysis of the requirements for the weapon. Leaders determine the number of targets that may appear and the number that can be engaged in a given period of time. Requirements are consolidated at each level, reviewed, and passed to the next higher level—company to battalion to brigade to division. The RSR is provided to the G4, who compares re-

quirements with ammunition availability that is provided by corps. The corps establishes the **controlled supply rate (CSR)** for those munitions in short supply. The CSR is the number of rounds per weapon per day that will be available to the tactical commander. After the G4 has compared requirements with availability, he identifies shortfalls and coordinates with the G3. A division CSR is then published to provide brigade and battalion commanders with their unit's allocation of short supply ammunition. Commanders at all levels carefully review the CSR as it may be necessary to alter tactical plans because of ammunition shortage. The CSR is continually reviewed and revised to keep pace with changes in ammunition availability.

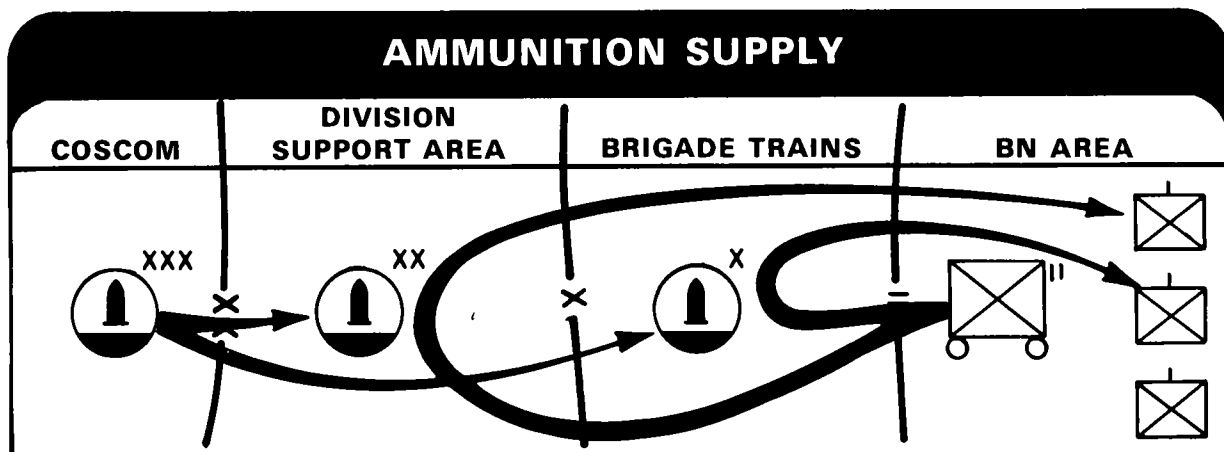
In the next planning step, the G4 must determine how the ammunition will be moved to the using unit. He coordinates with the COSCOM on the location of the ammunition supply point (ASP) and on the volume of ammunition that will be moved by COSCOM transportation assets. When possible, corps vehicles move ammunition directly to an ammunition transfer point in the brigade trains area. A comprehensive movement plan must be developed and exercised to insure that the combat forces can be adequately supported.

During the planning phase, **shortfalls** in ammunition availability and **movement capability** are identified. The G4 and G3 analyze the shortfalls and take correction action internally or request additional assistance from corps. Unresolved shortfalls may cause modification of the tactical plan.

Resupply

Resupply must be provided in the right quantities, at the right time, and as far forward as the combat situation permits. The key operating elements in ammunition

resupply are the COSCOM-operated ammunition supply point (ASP) which is placed in support of the division and the ammunition transfer points in each brigade



support area. The COSCOM and the division G4 coordinate to locate the ASP. The ASP is normally located near the division rear boundary, but may be located well forward in the division rear area. It should be located where it can provide the best support to the division. Management of ammunition resupply is the responsibility of the ammunition supply officer (ASO) who is a member of the DISCOM materiel management center. The ASO manages ammunition requirements and availability for the division. Ammunition requests from units must be approved by the ASO or the office of the division ammunition officer (DAO) before the ammunition can be issued by the ASP or ammunition transfer point. DAO members are frequently collocated with the ASP and ammunition transfer point to expedite resupply operations. They may also locate on the main supply route or on one or more access routes that are easily reached by the committed brigades. Handling and storing ammunition requires

time-consuming physical handling. For this reason, throughput shipments are used whenever possible from the corps storage area to the ammunition transfer points which the supply and transport battalion operates. Combat units pick up ammunition from the nearest ammunition transfer point. If the ammunition transfer point does not have the requested quantities, the combat unit goes to the ammunition supply point. Other techniques to reduce handling, conserve transportation, and streamline the resupply system include:

- Preconfiguring loads for high-demand consumers.
- Prepositioning of high-demand ammunition.
- Establishing type loads for each type of combat unit.
- Establishing trailer transfer points.
- Using throughput delivery to the consumer.
- Positioning small stocks near unit battle positions.

Sustaining the Battle

An adequate supply of ammunition must be sustained if the weapon systems are to continue in the battle. Ammunition availability, handling and movement capability, and unit location and re-

quirements will continually change, thereby requiring the G4, ASO, and other DISCOM units to closely monitor ammunition operations and adjust assets as required.

FUELING THE SYSTEMS

Because its capability to receive, store, and distribute bulk fuel is limited, the division depends on the COSCOM for fuel

support. As with ammunition support, the key to successful combat operations is to provide fuel to using units.

Planning

An efficient fuel system cannot be established without prebattle planning. The G4 and division support command/division materiel management center (DISCOM/DMMC) work together to plan for fueling operations. In developing the plan, they:

- Analyze the tactical plan.
- Establish fuel requirements.
- Determine handling, storage, and movement capability.

The first step in planning is to analyze the commander's concept of operations and the enemy threat. Planners must also consider the terrain and weather which could significantly affect the support plan and the enemy's capability to interdict supply routes. Close coordination with the G2 and the G3 is necessary.

Establishing fuel requirements is the next planning step. Requirements must be based on the actual type and quantity of equipment on hand and is best developed at company and battalion levels. Requirements are consolidated, reviewed, and refined by the brigade S4 and forwarded through the Class III section of the DMMC to the G4. If time does not allow this, the G4 can obtain consolidated equipment densities from the property book section of the DMMC. Fuel consumption factors in FM 101-10-1, **Staff Officers' Field Manual—Organizational, Technical, and Logistic Data**,

can then be used to estimate requirements. The planner insures that:

- All fuel consumers are considered, e.g., generators, aircraft, vehicles, and heating/cooking equipment.
- A reserve of fuel is maintained.
- A capability exists to meet surges in the system.
- Battle losses are considered.

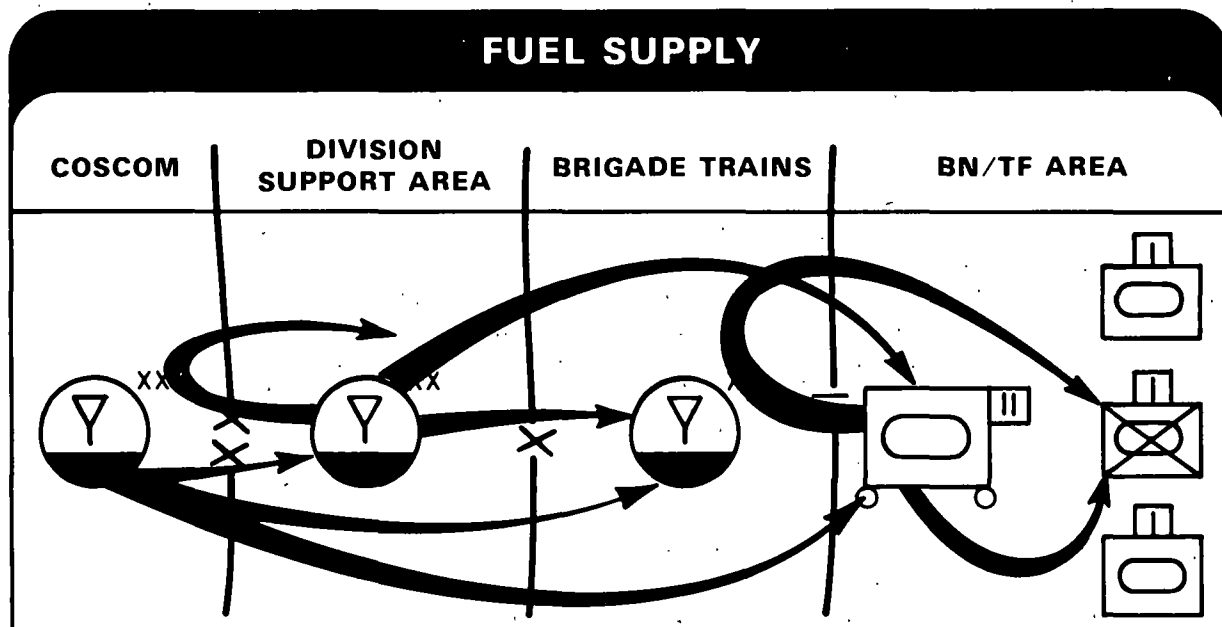
After the fuel requirements are verified at division, they are forwarded to corps. Handling, storage, and movement capability of the division must be determined by the planner. An infantry battalion has only one fuel transporter and trailer available to distribute fuel, and no storage capability is available. The division's capability is in the S&T battalion which uses 5,000-gallon semitrailers for distribution and fuel bags for storage. The planner must estimate the total storage and distribution capabilities and compare them with established requirements. Coordination with the COSCOM is then required to obtain the assets to overcome shortfalls. All available COSCOM assets should be used to move fuel as far forward as possible, with S&T battalion assets as a backup capability. Host country fuel movement and storage capability should also be used whenever possible.

Plan Development

After requirements and capabilities have been determined, the G4, with the assistance of the DISCOM Class III officer, develops a detailed plan to provide fuel to all elements of the division. Priority of support must be given to weapon systems. Maximum use is made of COSCOM transportation to deliver fuel directly to the brigade support areas and to the maneuver battalions whenever possible. Direct shipment of COSCOM assets to artillery and engineer battalions and the division support area provides forward support for all division units. S&T battalion vehicles are used to overcome shortfalls in COSCOM support and, in emergencies, to move fuel from the division or COSCOM fuel storage area to either the brigade support area or the forward units. The brigade support area will have a Class III section from the S&T Battalion's Supply & Service (S&S) company to provide limited storage and dispersal of fuel. When unit distribution is not possible, units pick up fuel from the Class III section and transport it to the weapon systems.

The fuel distribution plan is disseminated to all division units. To insure that the plan is complete and workable, it must be exercised frequently when the division is not in combat. The plan should be reviewed and revised as necessary based on new experience. Throughout fuel planning, the following considerations should be observed:

- Anticipate unusual fuel requirements.
- Throughput shipments as far forward as possible.
- Establish fuel reserves at the division support area (DSA).
- Use COSCOM transportation to the maximum.
- Alternate and backup distribution systems.
- Emergency procedures.
- Dispersement and vulnerability of facilities.



Aviation Fuel

When using fixed positions, the aviation battalion and air cavalry squadron receive aviation fuel directly from COSCOM tankers. Each unit has a storage capability in 500-gallon bags, and a distribution capability using vehicle-mounted tank and pump units. Each unit also has the capability to establish forward arming and refueling points (FARPs) to support air operations.

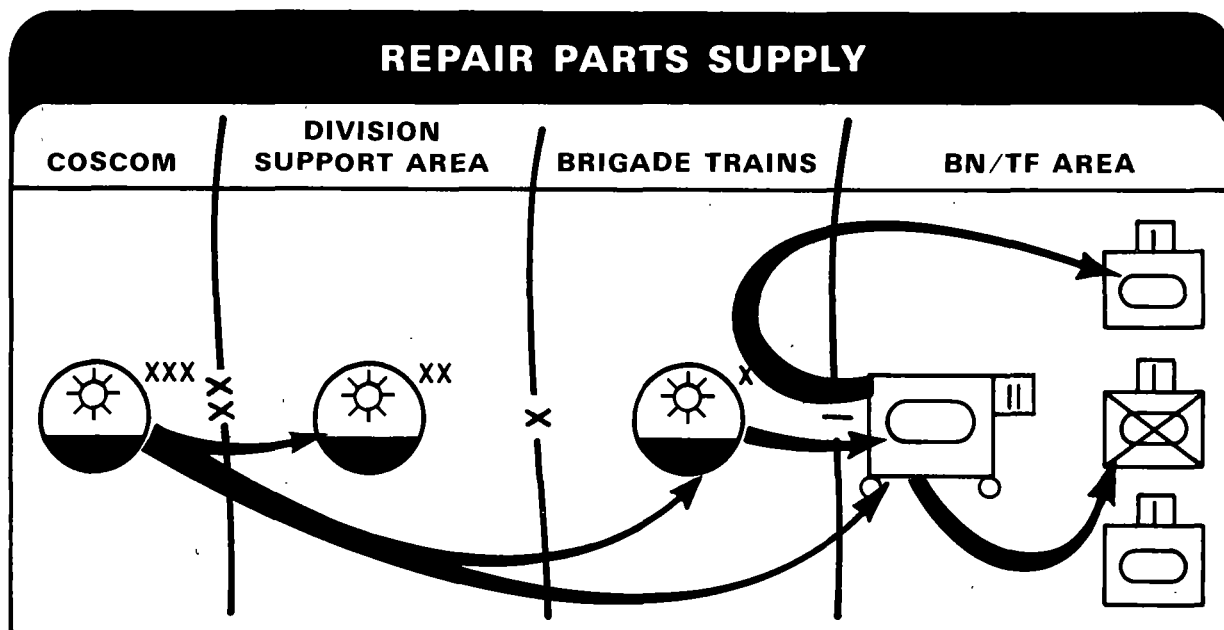
The S&T battalion should maintain at least one petroleum semitrailer that can

transport aviation fuel. It is also necessary to provide for emergency air movement of aviation fuel from either the DSA or the COSCOM fuel storage facilities. Because of the quality control requirements for aviation fuel, the S&T battalion, aviation battalion, and air cavalry squadron continually check fuel movement and dispensing equipment to prevent fuel contamination. Aviation fuel is tested prior to its use to detect and identify any contamination.

FIXING THE SYSTEMS

The keystone of maintenance is the preventive maintenance (PM) performed by operators and crew members to extend the life of the weapon system. Effective PM includes repair and replacement action to achieve the highest possible number of operable weapon systems. Repair of in-

operable equipment includes the replacement of parts and components, and the required services to return the equipment to an operable condition. When a weapon system is nonrepairable or cannot be repaired in a timely manner, a new or rebuilt weapon system is provided.



The division usually has an operational readiness float which may include tanks, armored personnel carriers, radios, small arms, wheeled vehicles, and aircraft. Whenever possible, replacements for readily repairable equipment come from an operational readiness float.

Each forward support maintenance company operating in the brigade support area is tailored to the requirements of the supported brigade. Maintenance support teams are organized to work directly with maneuver battalions and field and air defense artillery battalions.

The missile support company is usually located in the division support area. However, maintenance support teams often operate with forward area support teams, and are sometimes attached to battalions and Chaparral batteries when their special skills are required.

The transportation aircraft maintenance company is located at the division airfield. Maintenance support teams from this company should locate at forward arming and refueling points.

Repair and recovery are accomplished as far forward as possible at the lowest capable echelon. When equipment cannot be repaired on site, it is moved only as far as necessary for repair. When a combat vehicle or weapon is disabled, the unit maintenance section moves it to a location where the extent of repairs can be determined. If unit maintenance personnel cannot make the repairs—

- Maintenance support teams, if not already on site, are sent forward with parts to assist in repair.

- Additional parts or major assemblies are sent forward as required.

- The vehicle or weapon may be moved farther to the rear to await parts or more highly skilled maintenance support teams from COSCOM.

It may be necessary to cannibalize—to remove parts from damaged vehicles and weapons which cannot be immediately repaired—in order to prepare others for return to combat.

It is desirable to allow cannibalization decisions to be made as close to the site of damaged equipment as possible, preferably by battalion maintenance officers working with forward support maintenance company personnel. However, guidelines should be established by the division commander to preclude uncontrolled cannibalization of damaged vehicles and weapons. Sorting points can be established where designated forward support maintenance company personnel determine which of the more seriously damaged equipment should be cannibalized and which should be repaired and returned to action.

Procedures for repair and recovery of damaged combat aircraft are similar to those used for damaged vehicles. The transportation aircraft maintenance company is located at the division airfield. Maintenance support teams from this company should locate at FARPs. Repairs are made as far forward as practicable to return combat aircraft to combat quickly. As with combat vehicles, some aircraft may be cannibalized; but, here again, controls should be established. It may be necessary to use other aircraft to recover downed aircraft. These operations are described in FM 17-50, **Attack Helicopter Operations**.

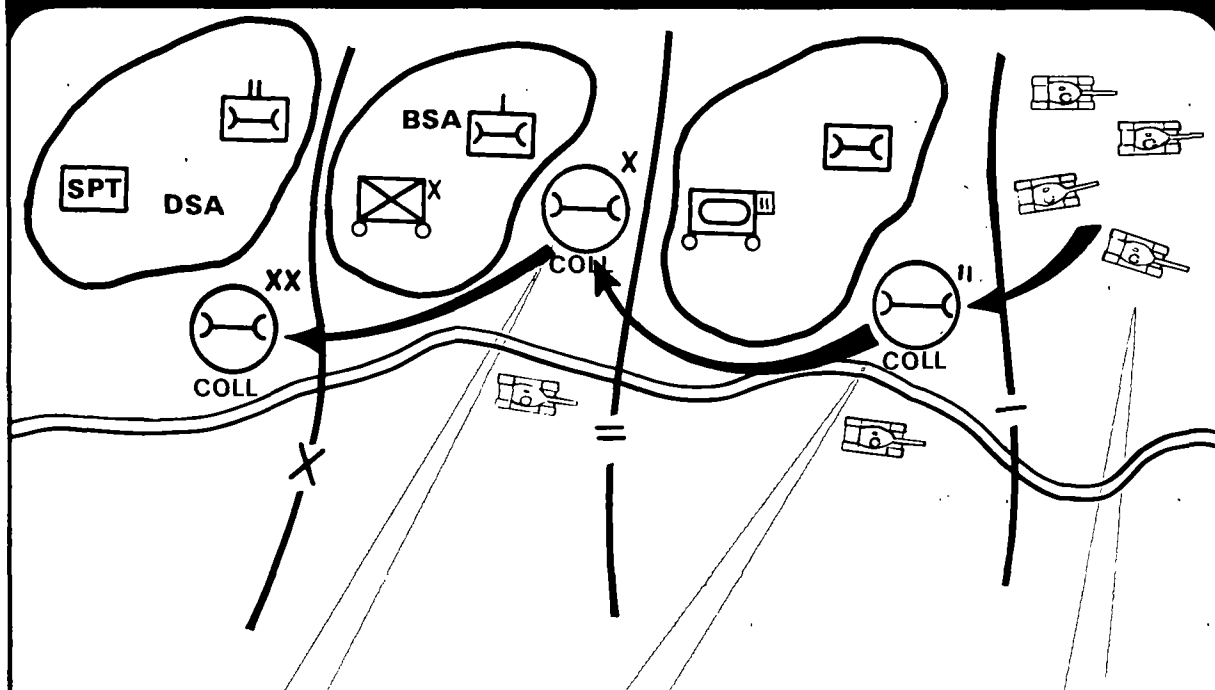
When equipment cannot be repaired immediately in the forward area, it is moved to a collection point established by the

maintenance battalion commander to await repair or evacuation to COSCOM general support maintenance units. Collection points can also serve as sorting points previously described. When it is necessary to evacuate equipment to a COSCOM general support unit, it is important to provide a replacement as quickly as possible.

This section has described repair and recovery operations primarily for major weapon systems. Evacuation of other unserviceable items such as signal equipment,

engineer equipment, tentage, and clothing to direct support units is the responsibility of the using unit. Direct support maintenance units further evacuate unserviceable equipment to COSCOM general support maintenance units when it is necessary to do so. This is usually done by back-haul on DISCOM or COSCOM cargo-carrying vehicles enroute or returning to COSCOM units. Maintenance collection points are established throughout the division for collection of unserviceable or abandoned materiel where disposition is determined.

EQUIPMENT EVACUATION



DISABLED VEHICLES ARE EVACUATED TO COLLECTION POINTS FOR PARTS, REPAIR, OR EVACUATION TO COSCOM GENERAL SUPPORT MAINTENANCE UNITS. REPLACEMENTS ARRIVE AS QUICKLY AS POSSIBLE.

UNIT MAINT PERSONNEL ATTEMPT REPAIR. MAINT SUPPORT TEAMS WITH PARTS ASSIST.

WEAPON SYSTEM REPLACEMENT OPERATIONS

The division G1, adjutant general, and G4 work together and with their corps counterparts to develop a replacement system. The object of the system is to obtain and distribute fully crewed, ready-to-fight weapon systems as rapidly as possible.

The same general considerations apply to replacing personnel other than crew members. Because of the importance of a crew replacement system, it is described here in some detail.

Before combat operations are conducted, casualty and weapon system loss estimates are normally prepared and provided to corps. As with ammunition and fuel, the data must be modified based on experience and best military judgment. **FM 101-10-1, Staff Officers' Field Manual—Organizational, Technical, and Logistic Data**, provides some data upon which estimates can be based.

To determine weapon system replacement requirements during combat operations, accurate and timely personnel strength accounting and casualty reporting and weapon system status reporting are necessary. Information can also be obtained from an effective battlefield information reporting system.

Weapon system replacements can be required under different circumstances such as the following:

- When both personnel and weapon losses are low, it is preferable to transport individual replacements directly to the unit. Replacement weapons may be picked up in the division or brigade support areas by units.

- When personnel losses are low and weapon losses are high, individual replacements join unit crews and replacement weapons at the nearest brigade

support area, or sometimes in the division support area. Replacement weapons are armed, fueled, test fired, and moved to the unit.

- When personnel losses are high and weapon losses are low, replacement crews should be transported directly to battalion combat trains.

- When both personnel and weapon losses are high, replacement crews join replacement weapons in the division or brigade support area. The weapons are armed, fueled, test fired, and moved to the battalion combat trains area.

The G1 or adjutant general works with the G4 to insure that individual crewmen or crew replacements can be moved rapidly to forward areas, joined with a weapon if required, and then provided to the unit. A useful tool for the G1 is a division reception point located in the division support area or in the COSCOM area where personnel assignments are made, crews are organized, and necessary orientation is accomplished.

When there are insufficient weapon system replacements to meet requirements, the division commander or G3 establishes assignment priorities based on recommendations of the G1. Some steps can be taken to reconstitute crews from within the division. For example:

- Soldiers in noncombat units with secondary crewman Military Occupational Specialties (MOSs) can be used.

- Soldiers with related skills, such as drivers, can be used.

- Lightly wounded soldiers can be returned to duty as quickly as possible.

- In any event, crewmen should not be required to perform noncrew duties when crew vacancies exist.

OTHER COMBAT SERVICE SUPPORT OPERATIONS

Supply

Supply operations include determining requirements and requesting, processing, storing, and distributing items to fulfill those requirements. Divisional units stock some combat-essential supplies of their own. Minimum stockage levels for divisional units are prescribed by the division or, in some cases, by corps or by Department of the Army publications. Supply distribution is managed by the division materiel management center.

Supplies are delivered to forward units by division whenever possible. This method

of resupply, called unit distribution, is a process in which the supplier always delivers directly to the unit. Another method, called supply point distribution, is a process in which the user must go to a distribution point to pick up supplies.

The division generally obtains its supplies from corps through unit distribution. The division, in turn, uses a combination of supply point and unit distribution to supply subordinate units. Critical items in short supply may be

CLASSES OF SUPPLY

To facilitate supply management, supplies are grouped into 10 major classes as follows:

- Class I—Subsistence, including gratuitous health and welfare items.
- Class II—Clothing, individual equipment, tentage, tool sets, kits, hand tool sets, administrative and housekeeping supplies, and equipment.
- Class III*—Petroleum, oil, and lubricants.
- Class IV—Construction materials.

- Class V*—Ammunition.
- Class VI—Personal demand items.
- Class VII*—Major end items such as tanks, armored personnel carriers, and attack helicopters.
- Class VIII*—Medical.
- Class IX*—Repair parts.
- Class X—Nonstandard items to support nonmilitary programs such as agriculture and economic development.

**Class III, V, VII, and IX supply procedures have been previously described in this chapter. Medical supply procedures (Class VIII) will be described under medical operations later in this chapter.*

delivered directly (called throughput) to the user by corps or theater support units. This method is most frequently used to provide major assemblies, ammunition, and fuel. Warning levels should be established to indicate when an item or commodity is in critical supply and exceptional action is required to correct the situation.

CLASS I—SUBSISTENCE. Frontline units carry enough combat rations on board combat vehicles to last 3 to 5 days. When the situation permits, hot meals may be prepared. It is normal, however, for divisional units to use combat rations during combat operations.

Rations are delivered by COSCOM to Class I supply points in the division or brigade support area based on strength figures provided by the division G1 or adjutant general. Within the division, supply point distribution is used. Usually, Class VI is delivered with Class I, and requirements are based on strength figures.

—Transportation—

The transportation motor transport company of the supply and transport battalion has light and medium cargo and fuel vehicles to support combat service support operations. Division transportation is controlled by the division transportation officer through the DISCOM movement control officer. When there is insufficient transportation to meet division requirements, additional transportation, air or ground, is requested from corps. If transportation is in short supply, the division commander or G3 must establish transportation priorities.

Helicopters can be used to move troops and supplies rapidly about the battlefield.

OTHER SUPPLIES. These are issued by the lowest echelon having the item. Normally, supply point distribution is used. Units submit requirements to forward area support team supply elements. Requests are forwarded to the division materiel management center for items not stocked by forward support elements, then to COSCOM for items not stocked by the division. The supply and transport battalion or COSCOM will deliver supplies to forward supply points in the brigade support area. Class IV and X supplies are handled generally the same, although their issue usually requires command approval.

Water is produced at water points established by the division engineer battalion. Water points are sited where they can best support combat operations. Supply point distribution is the normal method used to distribute water. When this method is not practicable, the supply and transport battalion delivers water to using units.

Utility helicopters from the division aviation battalion can be used for this purpose, but their capabilities are limited. When additional utility helicopters or assault support helicopters are required to support combat operations, they must be obtained from corps.

USAF tactical airlift (Military Airlift Command) can be used to transport troops and supplies rapidly. Preplanned requests are processed through logistics staff channels to the corps movement control center. Immediate requests are processed through operations and tactical air control party channels to the corps direct air support center.

Medical

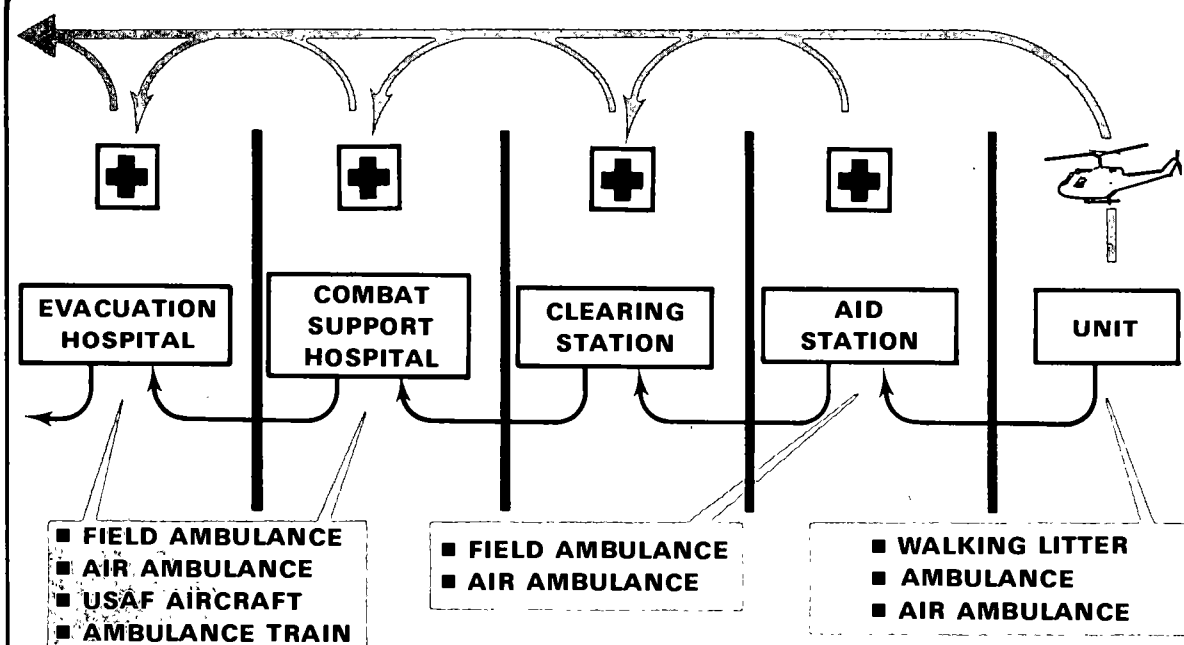
The division medical battalion evacuates casualties and provides limited treatment to include emergency dental service, psychiatric treatment, and optometry services. The battalion is composed of four medical companies. One company normally operates a clearing station in each brigade support area, and one company operates in the division area.

Casualties are evacuated no farther to the rear than their condition requires. Depending on the seriousness of the wound, they may be moved directly to a division clearing station or to corps combat support or evacuation hospitals. Casualties evacuated to a division clearing station

remain there only as long as it takes to treat and return them to duty or prepare them for further evacuation. From the division clearing station, casualties may be evacuated to a corps combat support hospital or to a corps evacuation hospital for further evacuation to a general hospital in Continental United States (CONUS).

For a number of reasons, it is important to clear the combat area of casualties quickly. Evacuation should be by air ambulance whenever possible. Ground ambulances are used when air evacuation is impracticable or when insufficient numbers of air ambulances are available.

MEDICAL EVACUATION



NOTE: ANY MEDICAL FACILITY MAY BE BYPASSED WHEN CONDITION OF PATIENT WARRANTS AND THE EVACUATION MEANS PERMIT.

Services Provided by the Division

Good finance, postal, recreation, religious, and legal services help commanders maintain morale.

FINANCE. The division finance company is normally located in the division support area. Forward support teams are organized for units located in forward areas.

POSTAL SERVICE. Postal service is normally limited to pickup and delivery of personal letters. Restrictions must often be placed on the size and volume of packages handled by the system. Transportation going forward to combat units for other reasons is normally used to deliver mail.

RELIGIOUS SERVICES. Religious services are usually conducted for small groups by unit chaplains operating

throughout the division. It is particularly important for chaplains to operate in forward areas where their services are most often needed.

RECREATION SERVICES.

Although opportunities for recreation are limited during combat operations, recreation services should be provided for those who can use them. Entertainment, field libraries, field service clubs, and organized athletics can help relieve boredom which often occurs in war.

LEGAL SERVICES. Legal services are provided by the division staff judge advocate who supervises and is responsible for the proper administration of military justice throughout the command.

Services Provided by COSCOM

The division does not have the capability to provide laundry, bath, and clothing exchange services. These services are provided by COSCOM units operating in the division area. When they are

available, the G4 determines where they should be located. When corps cannot provide these services, host nation facilities can sometimes be used.

Graves Registration

Neither division nor corps has organic graves registration units; these units are normally provided by theater support elements. It is to be expected that during the early stages of combat operations, graves registration units may not be available since these units are assigned to the reserves and must be mobilized. Therefore, it is necessary to train some divisional personnel in the recovery, identification, care, and disposition of remains.

Remains are evacuated to collection points in the brigade support area, then to a collection point in the division support area, and from there to a corps collection point. The division G4 should work with the corps G4 to obtain refrigeration equipment if available. Without refrigeration, remains must be interred immediately. FM 10-63, **Handling of Deceased Personnel in Theaters of Operations**, contains additional information on graves registration procedures.

COMMAND AND CONTROL OF COMBAT SERVICE SUPPORT OPERATIONS

In order to exercise command and control of combat service support operations, it is necessary to obtain certain information. To do this, it is first necessary to determine what information is required, when it is required, and how best to obtain it; procedures must then be established for getting the information. Some information of a recurring nature can be provided by automatic data processing (ADP) equipment. Information normally stored in this equipment includes:

- Major end items—quantities, location, and status (Class VII).
- Repair parts—quantities, location, demand, and fill data (Class IX).
- Personnel—strength, casualty, and replacement data.
- Maintenance management—input and output of shops.

ADP equipment sites should be hardened and procedures established for access to nondivisional ADP equipment if divisional equipment should become inoperative.

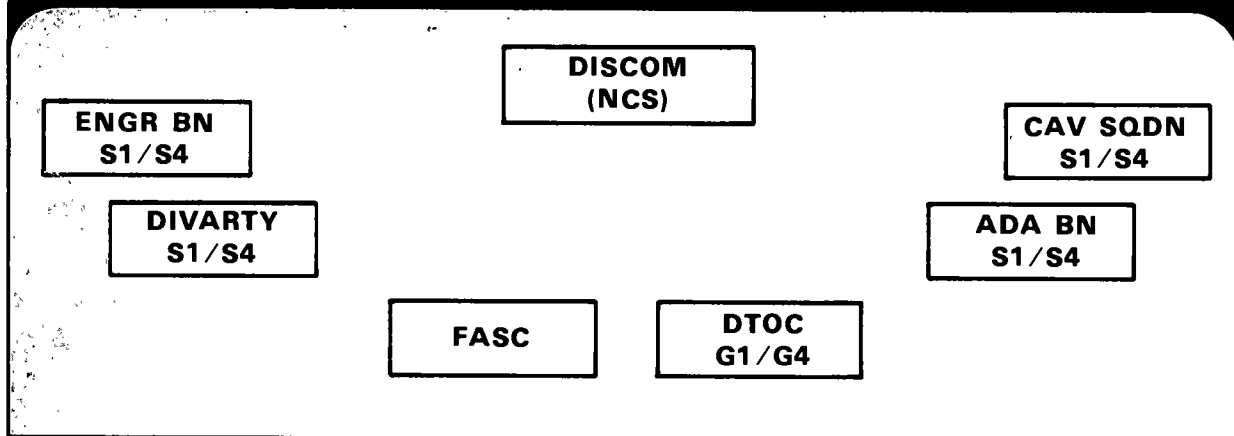
All other combat service support information is processed manually through divisional or corps communication nets or by messenger.

Much information of a critical nature, such as status of fuel, ammunition, operational weapon systems, and crews, can come from a good battlefield information reporting system. Other information is provided through the division administrative/logistics net over radio teletype (RATT) equipment.

Information is normally transmitted over this net in the form of standardized reports or requests for assistance. It is usually more detailed, though less timely, than that which can be obtained through a battlefield information reporting system.

Combat service support information may sometimes be delayed because of pressing tactical requirements. When this happens, messenger service normally used for bulk traffic may be the fastest and most secure means of transmitting information.

DIVISION ADMINISTRATIVE/LOGISTICS NET (RATT)



REAR AREA SECURITY

The division commander seldom has units available to provide for rear area security. The G3 has primary responsibility for rear area security and coordinates with the G2, the G4, the civil-military operations officer, the provost marshal, the DISCOM commander, and the rear area operations center (RAOC) of the COSCOM.

The division rear is secured by:

- DISCOM units securing the DSA as well as providing their own local security.
- Other units located in the division rear providing their own local security.
- Military police units supporting the division or the COSCOM RAOC.
- Air cavalry units conducting surveillance operations.

- Maneuver units assigned to the division. Assigning maneuver units this mission is a last-resort measure.

Because lines of communication are vulnerable to enemy aircraft, or to actions by guerrilla forces and regular forces operating in the division area, supplies or support teams that are dispatched may not always arrive. Therefore, procedures should be established to enable a unit to report when requested assistance or supplies have not arrived in a reasonable length of time.

If possible, contact is made with the host nation security forces to coordinate actions to deal with rear area problems. Should a large airborne or airmobile threat in the division rear be detected, maneuver units may be needed to defeat it. If divisional forces are not available, combat units are requested from corps.

FM 90-14, **Rear Area Combat Operations**, contains a detailed discussion of rear area security procedures.



ORGANIZATION AND EMPLOYMENT OF THE AIRBORNE AND AIR ASSAULT DIVISION

Part Two

CHAPTER 7 Airborne Division Operations

Airborne operations are most often joint operations. US Army airborne units are delivered to the operational area by US Air Force airlift aircraft.

THE AIRBORNE DIVISION

As a general rule, the airborne division fights like the infantry division, particularly during sustained ground combat. However, there are certain differences in airborne operations. These differences, which primarily concern how the airborne division

enters an operational area, are described in the following pages. First, however, it is necessary to describe the airborne division, its organization, and its capabilities and limitations.

— Organization —

The airborne division is organized to be rapidly deployed anywhere in the world to:

- Secure critical installations or facilities.

- Reinforce US and Allied forces.

- Conduct a show of force.

It can conduct a parachute assault in the enemy's rear to secure terrain or to

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interdict routes of resupply or enemy withdrawal. It can also be airlanded. It can conduct air assault operations as well as other missions normally assigned to infantry divisions.

The airborne division is organized in much the same way as the infantry division. However, each of its units is organized with only that equipment needed to conduct parachute assaults or airland operations. If the airborne division is to conduct sustained combat operations, it normally must be reinforced with additional medium artillery, air defense protection, and transportation.

The airborne division is organized around nine airborne infantry battalions. It has a headquarters and headquarters company and three brigade headquarters to provide for command and control. As is true of the infantry division, the airborne division has:

- An air cavalry squadron.
- An engineer battalion.
- A signal battalion.
- A combat electronic warfare intelligence battalion.

- A nuclear, biological, and chemical defense company.

- A military police company.

- A division support command.

While the organization and equipment may vary somewhat between the two divisions, the airborne division units operate in essentially the same manner as described in chapters 1 and 3.

In addition to the units previously described, the airborne division has:

- An armor battalion.

- Three antiarmor companies to provide long-range antitank guided missile fire.

- A division artillery organized with three light field artillery battalions.

- An air defense battalion organized with four gun batteries.

- A combat aviation battalion organized with an attack helicopter company and two combat support aviation companies.

Capabilities

The airborne division can achieve surprise by its timely arrival on or near the battlefield. The range of aircraft and the adverse weather aerial delivery system (AWADS) provide the Air Force with a capability to accurately deliver the airborne division into virtually any objective area under almost any weather condition with high winds and thunderstorms being the only exceptions.

Because the airborne division is tailored for air movement, it can be deployed more rapidly than heavier US divisions. All equipment is air transportable, and personnel are trained for airborne operations.

It is the only division with the immediate capability to conduct parachute assaults. It is the best equipped division to conduct airland operations.

Limitations

The limitations of the airborne division are:

- It must rely on USAF tactical or strategic airlift for initial entry into battle and for resupply until linkup with other ground forces.

- It requires more close air support than that normally provided to infantry divisions because the division is organized with only light field artillery. The absence of medium and heavy field artillery limits support for maneuver battalions and reduces the ability to deliver counterfire and to provide suppression of enemy air defense.

- It has limited ground and airmobility once delivered into the objective area. Nine of its 11 maneuver battalions are foot-mobile.

The organic truck transport in the supply and service (S&S) battalion is normally used to move supplies. Use of these trucks for troop movement hampers the division logistical effort.

The combat support aviation companies of the aviation battalion have only the capability to simultaneously lift the assault elements of two rifle companies.

- It is vulnerable to attack by enemy armor or motorized formations. The armor battalion organic to the division does not have sufficient armor protection to defeat heavier armored formations at close range in tank-versus-tank engagements. Substantial numbers of TOW and Dragon weapons in the division may help, but they do not completely offset this limitation.

- It is unsuited for operations in a nuclear, chemical, or biological environment.

Method of Employment

Airborne operations are most often joint operations conducted with the Air Force. The Air Force provides the airlift, close air support, and aerial resupply for the airborne forces. Normally, units participating in an airborne operation are assigned to a joint task force (JTF). Airborne operations may be supported by naval air and naval gunfire if the operational area is within range. Airborne operations are generally executed in two phases: assault and defense.

In the assault phase, divisional units are transported by Air Force aircraft to the operational area to conduct a parachute assault. Prior to and during the assault, supporting fires are delivered by close air support, naval gunfire, or both. After the

parachute assault, units assemble and seize assault objectives. Artillery begins providing fire support as soon as possible after landing. Close air support continues with priority to armor and targets beyond artillery range. Additional units are air-landed as landing zones are secured.

The second phase is the defense. It begins when assault objectives are seized. An all-ground defense is organized when the force is in enemy occupied territory.

The division masses and then conducts operations in the same manner as the infantry division. An airborne operation usually terminates upon linkup or extraction of the division.

PREPARING FOR COMBAT OPERATIONS

The airborne division may operate as part of a corps, a JTF, or theater command.

Most often, the division is assigned to a JTF.

Planning

Planning for airborne operations is conducted in great detail. When possible, rehearsals are held on terrain approximating that of the airhead. Four plans

are developed for the execution of an airborne operation: the ground tactical plan, the landing plan, the air movement plan, and the marshaling plan.

GROUND TACTICAL PLAN

The *ground tactical plan* includes:

- Missions.
- Sectors.
- Location of security forces.
- Task organization.
- Location and size of reserves.
- Fire support.
- Combat service support.

The ground tactical plan is developed from analysis of the mission; enemy, terrain, weather, forces available, and the start time and duration of the operation.

MISSION. The commander analyzes the mission and issues planning guidance; this provides the basis for appropriate staff estimates. After considering the latter, the commander makes a decision and announces his concept for executing the mission. The staff then prepares the plan.

ENEMY. The enemy situation is analyzed as described in chapter 3. Of particular concern are:

- Composition, disposition, and strength of enemy forces in the objective area.

- Location of enemy units capable of reinforcement in the objective area.

- Disposition and density of enemy air defense.

Mounted enemy forces within or close to the objective area present the most serious threat because of their tactical mobility, armor protection, and firepower. Enemy motorized and armored unit movement times are computed to determine when these units can arrive in the objective area. With this information, the potential effect of the enemy on the operation is estimated and plans can be made to counter him.

TERRAIN. Terrain is first considered for offensive operations. That terrain which must be seized to accomplish the mission is determined. Potential drop and landing zones are evaluated. Routes of ingress and egress that take advantage of terrain for cover and concealment on selected avenues of approach to potential drop or landing zones are selected. The combination of drop

zones, landing zones, and avenues of approach which offer the best advantage to the division is also selected.

Once terrain has been analyzed for offensive operations, it must then be considered for defensive operations. Terrain which must be retained or controlled is identified. Enemy avenues of approach into the operational area are analyzed. Battle positions which offer good cover and concealment and long-range fields of fires are planned along avenues of approach. Natural obstacles which can be extended or improved are also important.

WEATHER. Weather in the objective area must be checked. With the exception of high winds or thunderstorms in the objective area and less than minimum acceptable weather conditions at departure airfields, weather has only a limited effect on delivery of an airborne force. Precipitation does not affect parachute operations. Wet soil conditions, however, can prevent airland operations. Limited visibility caused by rain or fog can hamper delivery of supplies and equipment by the low altitude parachute extraction system (LAPES) and can limit close air support.

The degree of visibility in the objective area during an airborne assault influences the conduct of the operation. While illumination to improve visibility can be generated artificially, it may not offer a greater advantage. Periods of reduced visibility conceal the airborne attack and add the element of surprise; however, additional assembly time in the operational area may be required.

FORCES AVAILABLE. Sufficient airlift must be available to deliver the division to the objective area. When there are too few aircraft to deliver the assault echelon in a single lift or in multiple lifts over a short period of time, risk to the force

could be unacceptable. Airlift must be available not only to deliver the force but also to sustain it until completion of the operation.

START TIME AND DURATION OF THE OPERATION. Planners at all echelons must know the available preparation time and the expected duration of the operation.

The ground tactical plan serves as the basis for the other three plans described below.

LANDING PLAN

The landing plan contains the sequence and method of delivery into selected drop and landing zones in the area of operations. The landing plan is a worksheet used by planners to aid in developing the marshaling and air movement plans.

AIR MOVEMENT PLAN

The air movement plan specifies aircraft loads, assignment of units to serials and columns, loading and departure sites, flight routes, and other measures for air movement from the departure area to the area of operation.

MARSHALING PLAN

The marshaling plan provides for the assembly of personnel, equipment, and supplies to be employed in the execution of the airborne operation. It allocates time for completion of airborne assault preparations such as detailed issuance of orders, preparation and rigging of loads, and movement of loads to the aircraft sites.

The landing plan, air movement plan, and marshaling plan are developed in coordination with the US Air Force. Procedures for developing these plans are described in FM 57-1/AFM 2-51, US Army/US Air Force Doctrine for Airborne Operations.

Organizing for Combat

The division is organized into **three echelons** for an airborne operation: assault, follow-up, and rear echelons.

- The assault echelon consists of units required in the initial stages of the operation to seize assault objectives.

- The follow-up echelon includes units required to sustain the operation and units needed to conduct operations as part of a larger force after linkup. This echelon includes the rest of the assault units, DISCOM headquarters, most of the maintenance battalion, and elements of the supply and service battalion.

- The rear echelon contains those units or elements that are not required in the airhead. They normally remain in the departure area during the operation or until linkup.

The airborne division organizes for combat much like the infantry division, with one major difference: units not nor-

mally attached to brigades, but which operate within their sectors, are attached for the assault phase of the operation. Attachment provides for control until parent units are established within the division airhead. Brigade attachments normally include one light field artillery battalion, an ADA battery, an engineer company, a military police platoon, a forward area signal center platoon, a medical company, elements from the supply and service battalion, and tactical air control parties. These units normally revert to direct support and continue to support the brigade after control is centralized.

The sequence of units is determined by the missions assigned. Brigade combat elements land on or near assault objectives. This is done to insure early securing of assault objectives by surprise. Air Force combat control teams and FACs accompany

the lead brigades. Units assigned security missions are among the next priority of units to arrive, and they immediately occupy forward security positions. The division reserve and other division troops follow.

Personnel and equipment are crossloaded on aircraft within a serial. Crossloading permits personnel and equipment to exit the aircraft in a sequence that facilitates assembly. Recovery of heavy-drop items is expedited through the use of crossloading and distinctive unit markings.

Heavy equipment and supplies may be brought into the airhead by one or a combination of three different delivery means:

- Airland.
- LAPES.
- Parachute drop.

The **airland** method insures negligible damage to materiel; delivers vehicles ready for immediate drive-away; delivers crews with their weapons and vehicles; and provides for the backhaul of casualties, prisoners of war, and damaged equipment. Airland operations have the disadvantages of requiring landing zones and more time for delivering loads than the other two methods. Additionally, aircraft and units are extremely vulnerable during landing and unloading.

LAPES requires less preparation time, personnel, and equipment support than heavy drop. LAPES is a pinpoint delivery system for large items of equipment; however, materiel is more susceptible to damage when the LAPES method is used as compared to the airland method. Crews to operate delivered equipment must be present at the extraction zones before or shortly after delivery.

All combat equipment and supplies of the airborne division can be delivered by **parachute drop**. When airland facilities are not available and conditions preclude the use of LAPES, airborne units can still receive weapons, equipment, and supplies by parachute drop. The AWADS and the container delivery system (CDS) provide a

high assurance of accurate parachute delivery of materiel.

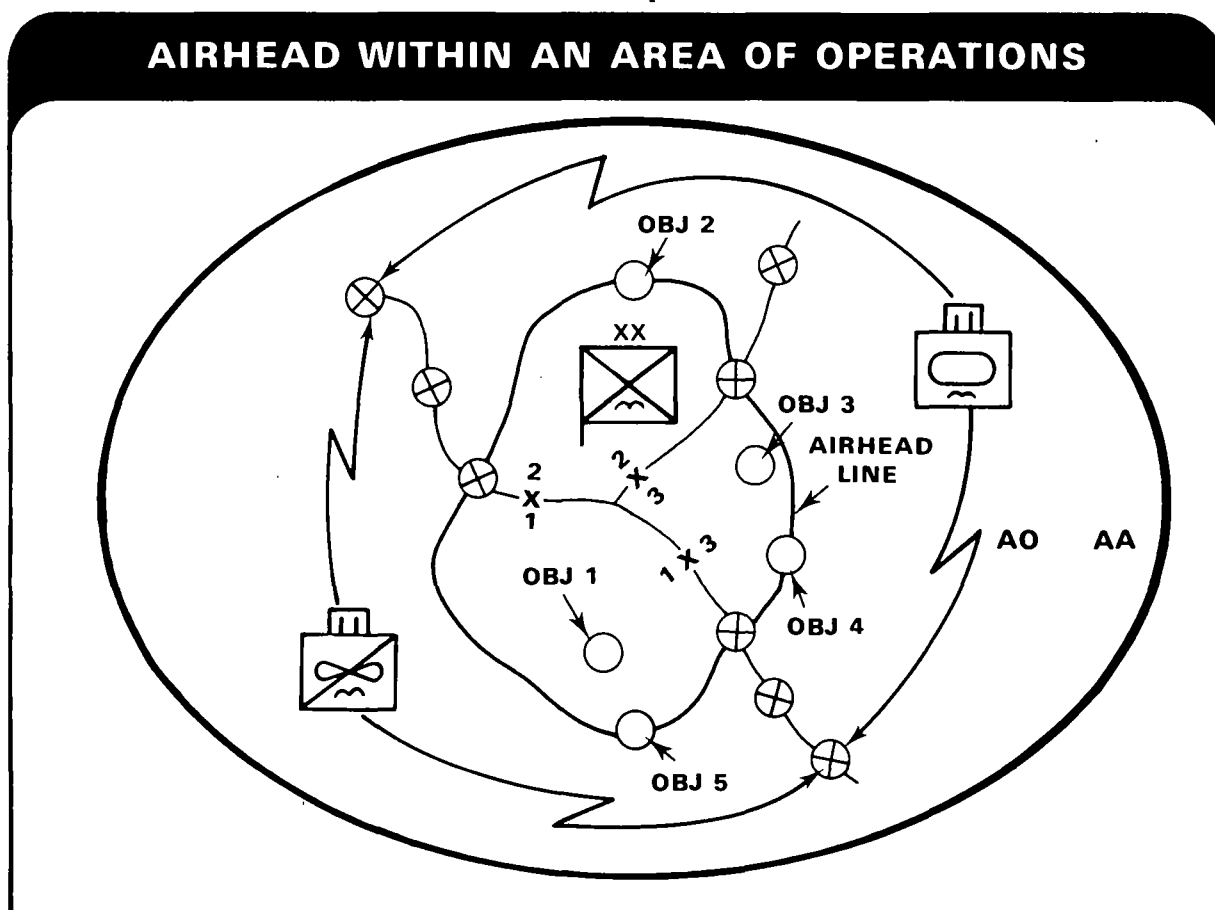
Helicopters are deployed by flying the aircraft to the airhead and/or airlifting them by Air Force aircraft. While flying the aircraft to the airhead is preferred, this may not be possible because of refueling requirements enroute.

Operational Terms

An **area of operations (AO)** is designated by a higher commander and outlines the general area in which the division operates. The **AO trace** marks the limit of the AO. The AO may include a requirement to secure a fixed facility.

Within the AO, the division commander assigns sectors of responsibility to the brigades. The brigade sectors are large enough to allow the brigades to establish a defense in depth along key avenues of approach.

AIRHEAD WITHIN AN AREA OF OPERATIONS



An **airhead** is an area designated by the division commander which, when secured, permits the landing of forces or supplies and provides space to maneuver. The airhead may be used for a mission such as securing an airfield. It is used to plan, control, coordinate, and mass indirect fires. The **airhead line** indicates that portion of the airhead where the major battle is expected to be fought. The area outside the airhead line includes the brigade security area and the division security area. The

area within the airhead is organized into brigade sectors.

Assault objectives are assigned in either the AO or airhead. An assault objective may be an installation or terrain feature specified in the division mission. Brigade commanders determine the size and composition of forces necessary to secure objectives. Assault objectives are numbered in priority of importance.

OPERATIONS

The airborne division will be committed to combat by parachute assault, by airland

operations, or by a combination of these two methods.

Parachute Assault

Normally, airborne operations are initiated by parachute assault. Parachute assault permits delivery of combined arms teams into the division airhead in less time than airland operations require. Landing zones are not required and security of drop zones is not as critical. When used, airland

aircraft follow aircraft delivering parachute units. A time interval between serials permits parachute units to clear the landing area of enemy forces and to remove parachutes, equipment, heavy-drop loads, and obstacles.

ASSAULT PHASE

The assault phase begins with the landing of the division in the airhead and terminates when assault objectives are seized. For the assault phase, the division commander assigns objectives and zones to the brigades, sets priority of fires, and provides the necessary forces to each brigade according to its mission. He also designates the size of the reserve and determines where it is to be located. ✓

During the assault, brigade units land in their assigned zones. Units comprising the division reserve, and other units not attached to brigades, land in prescribed drop and landing zones. Command groups move with different serials in order to preclude loss of an entire command group due to enemy action or aircraft abort.

Brigades assign assault objectives and zones to battalions. Drop and landing zones are located on or close to assault objectives to exploit the advantage of surprise. Ground organization of forces is accomplished in assembly areas near drop zones.

When assembly areas are not located on assault objectives, the brigade attacks to seize assault objectives in the same manner as does the infantry brigade.

After assault objectives have been seized, **field artillery units** displace well forward within the brigade sectors to support security forces. When security forces withdraw, the artillery displaces to preselected positions.

Air defense batteries enter the airhead early to provide air defense for drop zones, landing zones, arming and refueling points, and other critical division installations. Insertion of air defense units may be by heavy drop, airlanding, or by LAPES. Batteries initially operate independently under brigade control until the ADA battalion is able to assume operations.

When the **engineer battalion** headquarters becomes operational, its companies revert to battalion control and operate in direct support of the brigades. Engineers may be tasked to construct landing facilities or to rehabilitate existing airfields; but when so tasked, they will need to be augmented because the engineer battalion has limited construction assets.

Whenever possible, **Army aircraft** fly into the AO as soon as possible after the initial assault. Flights are closely controlled and regulated to avoid interference with Air Force airlift. Multiple flight routes, nap-of-the-earth (NOE) flight techniques, electronic countermeasures, and tactical deception operations are used to avoid enemy aircraft and air defense during the flight to the division AO. To aid the flight, field artillery is used to suppress enemy air defenses, and tactical aircraft conduct counterair operations.

If the distance from the departure area to the AO is beyond the combat radius of Army aircraft, forward refueling points are established enroute in areas under friendly control. Refueling points are located in areas that have:

- Natural cover and concealment.
- One or more extraction zones.
- Sparse population.

Normally, the division provides security for refueling areas. After refueling, the security element departs with the last flight of refueled aircraft.

If available, Navy carriers may be used as refueling bases. They may also be used to transport aircraft part way to the AO.

When Army aircraft cannot be flown into the objective area, they may be disassembled and transported by Air Force cargo aircraft. This method is time consuming and further complicated by the complexity of reassembly in the area of operation.

Since the division is most vulnerable to counterattack immediately after landing, division **security forces** are among the first units to be introduced into the airhead. They land on or near positions that they intend to occupy during the assault phase. Their mission is to intercept enemy forces moving toward the airhead and to prevent the enemy from interfering with the seizure of assault objectives. To accomplish the mission, units often land on or astride approaches into the airhead.

The security force is organized to provide warning of an enemy attack; to delay and disorganize the enemy forward of the main defensive positions; and to determine the location, direction, and speed of any enemy attack. It operates 10–30 km forward of the main defensive positions. The division security force is organized around the armor battalion, air cavalry squadron, and attack helicopter company, with the commanders of the armor battalion and air cavalry squadron commanding portions of the security force. Airborne infantry battalions may sometimes operate with the security force, provided they can be transported by helicopter. Each unit is normally assigned a sector. It is supported by some ADA units and by two or three field artillery batteries.

Brigade security forces are positioned after assault objectives are seized, or simultaneously with the seizure of the airhead in the case of an airborne assault. Although the brigade is responsible for its security force, the division may specify its general location. The division may also designate specific road blocks or observation posts for brigades to man.

The **division reserve** is organized to:

- Seize an assault objective *previously assigned* to another unit.
- Reinforce a brigade.
- Block or counterattack an enemy force that has penetrated the security force and is threatening the success of the operation.

The division reserve enters the area of operation as part of the assault echelon. When more than one mission is assigned to the reserve, priorities are established. The assembly area for the reserve may be within the sector of a committed brigade, or it may fall within the zones of two brigades. The division reserve is not assigned an assault objective. In the defense, the reserve is

normally positioned behind the brigade defending along the most dangerous avenue of approach. The reserve may be created for a variety of tasks:

- Counterattack.
- Reinforce brigades.
- Support by fires.
- Provide security forces.
- Construct battle positions and barriers.

The reserve is normally organized with the armor battalion, infantry, and attack helicopter units. Infantry and armor are used to add depth to the defense, block enemy penetrations, and counterattack by fire or by fire and maneuver. Air cavalry and attack helicopters are usually employed in security and economy of force measures and counterattacks.

Normally, the brigade commits all battalions to the assault. The **brigade reserve** is the battalion attacking the least critical assault objective. A dedicated reserve is established once the brigade has seized its assault objectives.

DEFENSE PHASE

The division defends to protect and retain areas or installations seized during the assault phase of the operation. Because an airborne assault is most often conducted in the enemy rear, an all-around defense is required. The airborne division defends by employing a position defense. The division commander assigns sectors to brigades and may establish an airhead line. He also determines whether brigades are to change task organizations following the assault. He designates the security forces and directs where and when they are to operate. Priorities are established for fires, engineer

support, and combat service support, as necessary.

DEFENSE AGAINST INFANTRY FORCES. The division defends against infantry forces by employing a position defense. The defense is organized to deny enemy access to the airhead. Battle positions are established to stop enemy penetrations. Enemy forces penetrating the airhead are destroyed or ejected by counterattacks.

A linear position defense is organized by arraying units laterally around the outer

limits of the airhead and using interlocking machinegun fires. Battalions are positioned to block infantry avenues of approach.

DEFENSE AGAINST MOUNTED FORCES. The airborne division is not adequately equipped to defend against mounted forces. However, when it must do so, the division organizes positions in depth along mounted avenues of approach. The position defense in depth is designed to wear down the attacker with increasing

intensity of antiarmor fires from antitank guided missiles (ATGMs). As a general rule, the armor battalion, air cavalry squadron, and attack helicopter company are employed along mounted avenues of approach after they complete security operations. Antiarmor companies are also employed in depth along mounted avenues of approach. If there is more than one mounted avenue of approach into the area of operation, the armor battalion should be held in reserve until the location of the enemy main effort is determined.

— Airland Operations —

Units can be airlanded on terrain under the control of friendly forces near the line of contact or on secured locations in the enemy's rear.

A major advantage of airland operations over parachute operations is that units are assembled and ready for combat when they deplane. However, it takes time to land a sizable force; also, a secured landing zone is necessary. Even when multiple landing zones are employed, it takes longer to mass forces in the airhead during airland operations than during parachute operations.

Airland operations may be undertaken when:

- Local air superiority exists.
- Enemy ADA weapons are suppressed.
- Landing zones are secure.
- Unit integrity is important.
- Units other than airborne units are to be used.

Landing zones must be secured before airland operations begin. Units may be infiltrated or parachuted into areas to be

used for airland operations in advance of the operation. Landing zone security is provided by seizing and defending key terrain features that dominate the landing zone. When the airland operation is part of a combined parachute and airland operation, terrain features to be secured are designated as assault objectives and seized by parachute units. When only airland operations are planned, units are infiltrated to seize critical terrain features designated as objectives. Regardless of the technique used to secure landing zones, airland operations commence as soon as landing zones are secure and safe for aircraft to land.

The airborne division is normally augmented with parachute engineer units when improvement of landing zones is required. Augmentation is necessary because divisional engineer units are employed in mobility/countermobility operations and have insufficient equipment to improve landing zones.

Airland forces are introduced into the objective areas as early as possible, consistent with security and availability of landing zones. Units are landed on or close to the area in which they are to be employed. Since all elements cannot be

transported to the area of operation in the same aircraft, some reorganization of forces is required prior to initiation of operations. Care must be taken not to present a lucrative target while reorganizing units.

Selection of covered and concealed assembly areas minimizes unit vulnerability. Once assembled, airlanded forces operate like parachute forces as previously described.

LINKUP

Linkup occurs when two ground forces meet; it is often the conclusion of an airborne operation. Linkup is planned as a part of the ground tactical plan.

When planning for linkup, it is necessary to provide:

- Command relationships and responsibilities.
- Staff liaison.
- Schemes of maneuver.
- Fire support by each force.
- Communications, including recognition signals.
- Operations following linkup.
- Assistance by the stationary force.
- Combat service support requirements.

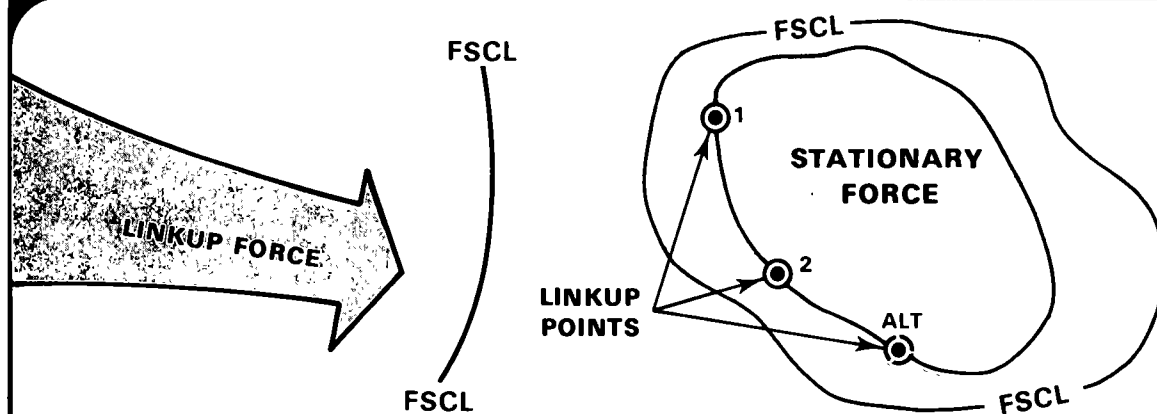
The headquarters directing the linkup establishes command relationships and responsibilities of the two forces. After linkup, the two forces can be combined to form a single force under the control of either commander, or both forces can continue to operate separately under the control of a higher commander.

The two forces maintain command and staff liaison by exchanging liaison officers during the planning phase and for the duration of the operation. It should be remembered that liaison officers are of no value if they cannot communicate with their parent headquarters.

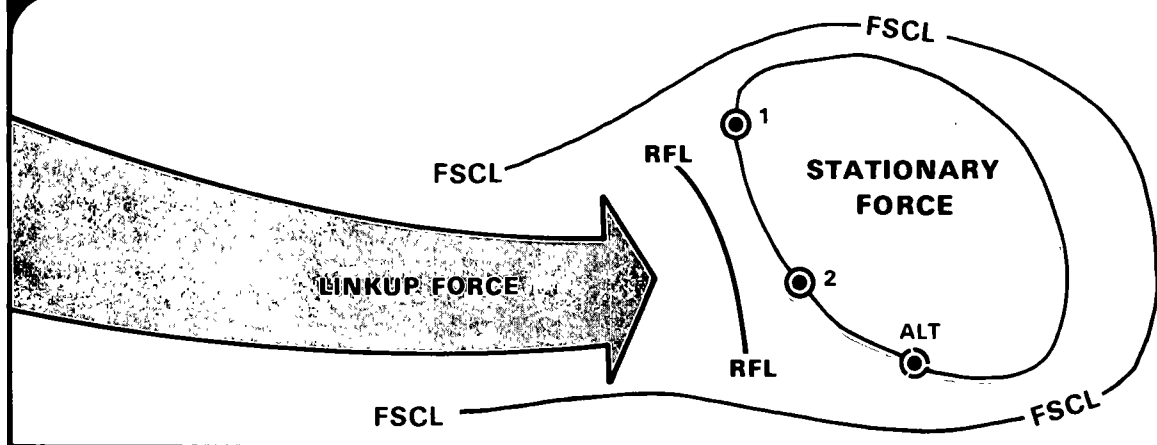
The two forces conducting a linkup jointly establish control measures. They select linkup points at which physical contact between the two forces will occur. These points are mutually agreed on by the commanders of the two forces. Linkup points should be easily recognizable on the ground by both forces and are normally located where routes of advance of the moving force intersect a line along which the stationary force is located. Alternate linkup points will depend on the number of routes being used by the linkup force, identifiable terrain features, and the enemy threat. Troops manning linkup points must be thoroughly familiar with procedures for mutual identification and plans for the rapid passage of advancing units. The stationary force assists by removing obstacles and selecting assembly areas for the moving force.

The commander directing the linkup establishes separate fire support coordination lines (FSCLs) for both forces. This permits fires to be placed beyond the FSCLs without coordination. As linkup becomes imminent, a single FSCL applicable to both forces is established. A restrictive fire line (RFL) is placed between the two forces. The RFL is placed as close to the stationary force as possible to permit the maneuvering force maximum freedom to move. Airstrikes in the area between the two forces are coordinated with both forces. After linkup, responsibility for fire support coordination for the force will be designated by the commander directing the linkup.

LINKUP OPERATIONS EARLY STAGE



LINKUP OPERATIONS LAST STAGE



The signal communications plan for linkup operations is developed in conjunction with the overall plan for the airborne assault. Formulation of the plan is normally accomplished at the headquarters directing the operation in conjunction with the communication-electronics officers of the forces involved. The communications plan should address:

- Communications necessary between the forces linking up and the headquarters which ordered the operation. This requires

an exchange of selected communications-electronics operating instructions (CEOI) items and common speech security equipment key lists. It may also involve the exchange of radio equipment and operators if an Allied force is involved.

- The use of aircraft to extend radio communications ranges and to provide air messenger services.

- Visual and sound communications means for day/night operations.

COMBAT SERVICE SUPPORT

When the airborne division is employed as an infantry division, combat service support operations generally are conducted as described in chapter 6. Combat service support for airborne operations is described in this section.

During deployment, the division support command (DISCOM) is divided into three echelons:

- Assault echelon.
- Follow-up echelon.
- Rear echelon.

The assault echelon consists of a detachment from the quartermaster airdrop equipment support company and a medical company for each deployed brigade. These units enter the operational area under the control of the brigade commanders. The airdrop equipment support detachment assists the brigade in recovery and evacuation of airdrop equipment from drop zones. The medical company provides medical and evacuation support for the brigades. The DISCOM assault echelon also includes a detachment of the headquarters and headquarters company, the medical battalion (minus), and a forward supply and service detachment which enters the area of operations under the DISCOM commander's control.

The bulk of the DISCOM enters the area of operations in the follow-up echelon. This echelon consists of the headquarters and headquarters company (minus), a detachment of the quartermaster airdrop equipment support company, the remainder of the maintenance battalion, and the supply and service battalion. Remaining DISCOM units stay at the departure airfield in the rear echelon. These units include the adjutant general and finance companies and the division materiel management center.

Combat service support is provided by a forward area support team located in each brigade support area. The team is not a fixed organization but is tailored to satisfy the requirements of the supported brigade. The team is formed around a forward support maintenance company, a forward supply and service detachment, and a medical company. The coordinator for forward area support team operations is the forward area support coordinator (FASCO) from the DISCOM staff. He works closely with the brigade and battalion S4s to provide combat service support to the brigade. The remainder of the DISCOM units in the area of operations are located in the division support area to provide back-up support for the forward area support team and to support other units in the area of operations.

Manning

Airborne operations should be launched with the division at full strength and with replacements on hand to fill initial combat losses. Since airborne replacements are not always readily available, the division should requisition personnel in time to allow their integration into units before the operation begins. The basis for replacement requisitioning is the G1's estimate of the number of casualties for the first three days of combat. As replacements are received,

they are assigned to units for training and rehearsals for the operation. Before the division marshals, replacements are withdrawn from units and consolidated under the control of the adjutant general company for phasing into the area of operations, as required, to replace actual losses. Replacements are airlanded whenever possible to preclude jump injuries and to facilitate control on arrival in the area of operations.

Supply

Three distinct phases of supply used during airborne operations are:

- Accompanying supply.
- Follow-up supply.
- Routine supply.

Accompanying supplies include classes of supplies taken into the objective area by assault and follow-up echelons. Quantities are designated by the G4. Accompanying supplies are further divided into unit, force, and reserve accompanying supplies. Unit supplies include the basic load of ammunition and prescribed loads of other classes of supply. They are packaged and loaded by the unit or are carried by the individual soldier. Loading, recovery, issue, and control of these supplies are the responsibility of the unit. Force supplies are bulk supplies of all classes which provide a backup for unit supplies during the early stages of the operation. Recovery and issue are the responsibility of the S4 of the deploying force. Some supplies of all classes are kept in reserve for the division. The DISCOM is responsible for reserve supplies to include handling, loading, recovery, storage, and issue.

Follow-up supply is either automatic or on-call and is based on the G4's estimate of the daily expenditure of all classes of supply for each unit. If unit transportation is limited, supplies should be delivered to each battalion and, when possible, to companies and platoons.

The AWADS allows the Air Force to deliver cargo in marginal weather. The LAPES or CDS normally are used. However, AWADS heavy drop is sometimes necessary.

Automatic follow-up supply is used during the early stages of the operation. Delivery is made by the Air Force on a planned schedule (normally once per day).

On-call, follow-up supplies are used to satisfy routine or emergency requests from committed forces. The G4 determines the stockage requirements by estimating the maximum daily expenditures for one day of operation, usually D-day. Expenditures for all classes of supply, to include end items of equipment, are determined and stockage requirements are doubled to provide a two-day level. The supporting unit maintains the two-day level of on-call supplies near the departure airfield for rapid delivery to Air Force transport aircraft. The supporting unit replenishes any issued items so that a two-day supply level is maintained until the requirement is terminated or modified by the airborne force.

Requests for follow-up supplies are initiated by the battalion S4 and forwarded through the forward area support team to the DISCOM. Approved requests are then forwarded by the most expeditious means to the rear echelon where the G4 establishes a priority for delivery. Requests are either routine or emergency. Routine requests require delivery in 24 to 72 hours, while emergency requests require delivery in less than 24 hours. The G4 arranges movement by Air Force aircraft and releases the supplies from the supporting unit. The necessary delivery information is then sent to the requesting unit so that preparations for recovery and handling can be made.

Automatic follow-up supply is based on consumption estimates and may not contain the exact quantities required by deployed forces. Use of automatic follow-up supply for an extended period can create excesses or shortages in different supply categories.

Routine supply should be initiated as soon as possible to avoid imbalances of supplies in the airhead.

The DISCOM commander directs the conversion to routine supply and bases his decision on the tactical situation and logistical status of the division. When routine supply is initiated, units requisition supplies using normal supply procedures.

Maintenance

Airborne units deploy with a 15-day level of repair parts. When deployed in the follow-up echelon, the maintenance battalion provides a forward support company to the forward area support team supporting each brigade. Habitual assignments are used to provide for the establishment of working relationships and the development of SOPs. Maintenance operations are similar to those of the infantry division, with the headquarters and main support company providing backup support for the forward support companies located in the brigade support areas. Maintenance support teams are deployed to battalion and company locations to assist in the on-site repair of equipment. When inoperative

Three days of supply are desired in the airhead (minimum safe level is two days). The division reaches the desired level by carrying three days of supplies into the area of operations. Except for emergencies, no resupply is provided on D-day. Automatic follow-up supply begins on D+1 when two days of supply are delivered. Thereafter, one day of automatic follow-up supply is delivered daily until routine supply begins.

equipment cannot be repaired in place, it must be moved to the brigade support area by the using unit.

The airborne division does not maintain an operational readiness float (ORF) of equipment in the objective area. Cannibalization of equipment is sometimes necessary. Although cannibalization is an excellent method of obtaining parts and components, its use *must be controlled* to prevent unnecessary destruction of equipment. Policies on cannibalization are established by the commander; however, cannibalization authority is normally decentralized to battalion.

Transportation

Ground transportation for the division is provided by the supply and service battalion. Requests for movement of supplies are processed through logistics channels from the requesting unit S4 through the forward area support team to the movement control officer (MCO) on the DISCOM staff.

The MCO controls and allocates vehicles from the supply and service battalion. Requirements that cannot be satisfied are forwarded to the division transportation officer who may use divisional aircraft or obtain vehicles from

other units in the division to satisfy the requirement.

Aircraft for combat service support (CSS) airlift are provided by the aviation battalion. The G3 allocates aircraft to the G4 based on their availability and the requirements of divisional units. The division transportation officer controls CSS airlift for the G4. Requests for air movement of troops are processed through operations channels from the unit to the division tactical operations center for approval. Requests for air movement of supplies are processed through logistics channels.

Transportation requirements within the airhead can be reduced by delivering supplies and equipment directly to the battalion or company in Air Force aircraft. Maximum use is made of LAPES, CDS, and

heavy drop to reduce transportation requirements, speed delivery of supplies, and reduce the vulnerability of transportation assets to enemy action.

Medical

The medical battalion deploys a medical company with each forward area support team in support of the deployed brigades, while the headquarters and main support company supports units in the division support area. Recovery and evacuation of casualties to the battalion aid station are a unit responsibility. Evacuation of patients from the combat battalions to the clearing stations in the brigade support area is performed by the medical company. Ground ambulances are the primary means of evacuation; however, aircraft, if available, are used when necessary. Forward medical companies also provide support to field and air defense artillery, aviation, and engineer

units. These units evacuate casualties directly to the nearest medical company.

Patients requiring evacuation from the objective area are held at the clearing stations until Air Force aeromedical evacuation is available. The Air Force establishes a mobile aeromedical staging facility (MASF) at the airhead airfield to receive patients and prepare them for aerial evacuation. The medical companies are responsible for evacuating patients from the clearing stations to the MASF. Medical procedures and Air Force and Army responsibilities at the airfield are further described in FM 57-1/AFM 2-51, *US Army/US Air Force Doctrine For Airborne Operations*.

Graves Registration

The airborne division does not have an organic graves registration capability and requires augmentation to perform this function. During airborne operations, the division is not augmented with a graves registration detachment. Soldiers must be trained in the identification and processing of remains in order to establish and operate collection points. Units are responsible for the recovery of remains and their evacuation to the battalion aid station. After identification, remains are evacuated to the collecting point in the brigade trains area or the division collection point in the division support area using available

transportation. After coordination with the Air Force, Army units move the remains to the airfield for aerial evacuation. Since refrigeration may not be available, remains must be processed and evacuated promptly.

If aerial evacuation is not available, hasty or mass burials may be required. Hasty burials are a common responsibility at each level and are used only when the tactical situation prevents evacuation. Authority for mass burials is normally retained by the task force commander. The training of graves registration personnel should include the procedures for marking and recording hasty burial sites.



CHAPTER 8

Air Assault Division Operations

The air assault division combines a high degree of strategic mobility with an extremely high degree of tactical mobility within the target area. The air assault division uses organic helicopters to move combat, combat support, and combat service support units on the battlefield. This gives the division the ability to deploy and redeploy rapidly to engage the enemy and operate over a wide area. Before describing the division's operations, it is first necessary to describe its organization, capabilities, limitations, and method of employment.

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THE AIR ASSAULT DIVISION

Organization

The air assault division is organized with:

- Three infantry brigade headquarters.
- Nine air assault infantry battalions.
- A division artillery organized with three field artillery battalions and a target acquisition battery.
- A division support command.
- An air cavalry squadron.
- An aviation group consisting of an assault support helicopter battalion, two assault helicopter battalions, and a general support aviation company.
- An attack helicopter battalion (assigned to the aviation group for administration).
- An engineer battalion.
- A signal battalion.
- An air defense artillery battalion.
- A combat electronic warfare intelligence battalion.
- A nuclear, biological, and chemical (NBC) defense company.
- A military police company.

Air assault infantry division operations are conducted generally as described in chapters 1 and 3, only at a much higher tempo or over greater ranges than the infantry division.

Capabilities

The air assault division has the ability to:

- Attack from any direction in otherwise inaccessible areas.
- Overfly barriers, bypass enemy positions, achieve surprise, and cause the enemy to react prematurely or disclose his positions to other attacking forces.
- Concentrate, disperse, or redeploy rapidly to extend the division's area of influence, to develop enemy contact, or to decrease the division's vulnerability to enemy attack.
- Maintain a rapid tempo of operations by fighting simultaneously in more than one direction or in more than one area of operations.
- Conduct operations under adverse weather conditions and at night to facilitate deception and surprise.
- Rapidly move field artillery by air or commit the attack helicopter battalion to weight the battlefield.
- Conduct airhead operations without external support for approximately two days.

— Limitations —

The air assault division has some limitations:

- Helicopters cannot fly in extremely severe weather conditions.
- Near-secure landing zones are required for delivery of units in the objective area.
- The division is vulnerable to enemy tactical aircraft, air defense, and electronic warfare systems.
- The division has little ground transportation.

— Method of Employment —

The division conducts air assault operations by transporting infantry and field artillery battalions with necessary combat support and combat service support into battle by helicopter. Once deployed on the ground, air assault infantry battalions

fight like those of the infantry division; however, normal task organization of organic aviation permits rapid aerial redeployment. This is the essence of air assault tactics—rapid tempo of operations over extended ranges.

PLANNING FOR COMBAT OPERATIONS

The division commander uses the same basic decisionmaking process as described in chapter 3. In order to exploit the

division's mobility, the division routinely employs fragmentary orders and SOPs.

— Plans —

Five plans are developed for the execution of an air assault operation: the ground tactical plan, the landing plan, the air movement plan, the loading plan, and the staging plan. The ground tactical commander directs the entire operation. In addition to normal coordination, a meeting is routinely conducted with the air mission commander (AMC) or commanders. The commander of the lift element normally is the coordinator for all aircraft. The aviation group commander is the overall aviation support coordinator.

The ground tactical plan includes:

- Missions.
- Zones of attack, sectors, or areas of operation.
- Task organization.
- Location and size of reserves.
- Fire support.
- Combat service support.

The ground tactical plan serves as the basis for the other four plans described below.

The **landing plan** provides the sequence, time, and place of landing troops, field artillery, equipment, and supplies. The landing plan must support the ground tactical plan; it cannot be finalized until the ground tactical plan is completed, but the two plans are developed concurrently. The purpose of the landing plan is to insure arrival of the various units at designated times and locations. The landing plan may be a separate annex, or it may appear on the operation overlay. The information developed in the landing plan serves as the basis for the air movement plan.

The **air movement plan** is based on the ground tactical plan and the landing plan. Its purpose is to schedule and provide instructions for air movement of troops, equipment, and supplies from pickup zones to landing zones. The air movement plan provides coordinating instructions regarding air routes, checkpoints, speeds, altitudes, formations, actions enroute, and recovery of downed aircraft. In operations involving multiple lifts from the same pickup zone, a lift table is *critical* to insure proper organization of lifts. This plan is closely coordinated by the ground tactical commander and the air mission commander.

Air avenues of approach are routes that provide suitable paths for a particular number of aircraft to reach a landing zone. Terrain and enemy air defense are key factors in selecting air avenues of approach. Forests and swamps are good areas to fly over because they afford ground troops little opportunity to see and fire on helicopters passing overhead at tree-top level. Low-altitude operations over heavy foliage

decrease the distance at which sound can be detected; they also hamper identification of the source and direction of the sound.

Selected air avenues of approach are masked from possible enemy air defense radar and weapon locations. Ridgelines are crossed as infrequently as possible to reduce exposure time to radar detection.

Navigation at low altitudes is difficult and should be planned for in advance of the operation. The presence of easily recognizable terrain features, such as a river or road, can significantly improve the pilots' ability to navigate. Terrain corridors are desirable because they provide for easier navigation and protection. Linear features that parallel the direction of flight are useful for navigation but must be used carefully to avoid ambush. Use of tactical navigation aids and artillery-delivered smoke can assist in navigation.

All aircraft (lift, air cavalry squadron, attack helicopter battalion, and medium lift) and supporting fires are controlled by the lift element flight lead. As previously described, the ground tactical commander remains in overall command throughout the operation and makes such decisions as aborting the primary landing zone.

In a typical air assault, the air cavalry reconnoiters flight routes and landing zones; the attack helicopter battalion takes up attack positions at likely ambush points; and the lift ships proceed along predesignated flight routes followed by medium lift with field artillery and combat service support. Suppression of enemy air defenses (SEAD) fires are generally controlled by flight lead. Enemy weapon systems or units that pose a threat and cannot be avoided must be suppressed during the air movement. Both known and suspected enemy locations are targeted.

Suppression is planned by the fire support coordinator at the headquarters planning the assault—normally brigade headquarters. Field artillery is the primary fire support means used to suppress enemy gunners.

The loading plan is based on the air movement plan. The purpose of the loading plan is to insure that troops, equipment, and supplies to be moved by helicopter are loaded on the correct aircraft. It is critical to distribute essential items of equipment and weapons among the aircraft. For example, a single aircraft should not be loaded only with radios; its loss would result in a major loss of valuable assets. A detailed unit SOP

covering the organization and operation of the pickup zone (PZ) aids in the preparation of the loading plan. Copies of the loading plan should be distributed to PZ control, unit command control elements, and the aviation flight leader. If time permits, copies should be distributed to all aircraft involved in the operation.

The staging plan contains the schedule of the arrival of troops, equipment, and supplies at their respective pickup zones. A staging plan is prepared when a major repositioning of forces is necessary for the conduct of operations. It is based on the loading and air movement plans.

Special Considerations

Some aspects of air assault operations require special consideration:

AVIATION. For air movement, it is necessary to consider:

- Time for aviation unit planning.
- Locations and quantities of aviation fuel.
- Aircraft availability.
- Time to brief and move the unit.
- Weather and visibility conditions.

- Enemy air defenses.
- Pathfinder requirements (PZ and landing zone (LZ)).
- Enroute command control.
- Initial and follow-up resupply.

OBJECTIVES. Normally, enemy forces are selected as objectives, but terrain objectives may be selected when they contribute to destruction of enemy forces. Landing zones may be designated as assault objectives for initial assault forces when subsequent lifts are required.

ENEMY. Information pertaining to enemy composition and disposition in and around the landing zones is most important. An estimate can then be made of enemy ability to interfere with the assault. Enemy capability to counterattack the air assault force must also be considered.

TERRAIN. Factors to be considered in analyzing the terrain for an airmobile operation are mission, type of operation, size and composition of friendly forces involved, and weapons and equipment available to support the operation. Terrain in the objective area is analyzed to determine where the air assault force can be provided with the best observation, fields of fire, concealment, and cover. Obstacles to air and ground movement are identified. Key terrain for an airmobile operation includes objectives of the assault and subsequent operations, primary and alternate landing zones, and emergency landing zones enroute to the objective. Enemy avenues of approach and air routes in and out of the objective areas are identified.

WEATHER. Air assault operations can be conducted in all except the most severe weather conditions such as ceilings less than 200 feet and visibility less than one quarter mile. Adverse weather and darkness make navigation more difficult; somewhat limit tactical air and attack helicopter operations; reduce observation and surveillance; and may preclude redeployment or extraction of committed units. However, low-visibility conditions conceal air assault operations from enemy observation and engagement, thus increasing the possibility of achieving surprise.

ORGANIZATION for COMBAT. The mission, enemy situation, terrain, troops, and number and types of aircraft available

determine the organization for combat. The first concern is to deliver the required combat force to the objective as quickly as possible. The air assault division organizes into three echelons to conduct an operation: assault, follow-up, and rear echelons.

- The assault echelon consists of units required in the initial stages of the operations to seize LZs and objectives.

- The follow-up echelon includes units required to sustain the operation. This echelon includes combat support and combat service support units needed in the objective area.

- The rear echelon contains units or elements that are not required in the objective area. Normally, this echelon consists of combat service support units.

Since the division often will be given multiple missions requiring employment of brigades over widely dispersed areas, each brigade echelons its assigned units as appropriate.

Reserves retained by the division are small. The attack helicopter battalion is often held in reserve. Normally, reserves are included in the assault echelon. However, reserve units may be located outside the operational area to provide for flexibility of employment. Mobility for reserves is most important.

Combat support and combat service support units are attached to the brigades which they support during the assault. After the assault, command relationships may be changed to direct support if necessary.

LANDING ZONE SELECTION.

Considerations in selecting a landing zone are size, proximity to the objective, and proximity to enemy units. Landing zones should be close to objectives. However, assault elements should not be subjected to immediate enemy ground attack or observed fire on landing. Landing assault elements immediately on or adjacent to assault objectives will provide for the most surprise and insure that troops are fresh for fighting.

Landing assault elements at a greater distance from the objective, in a more secure landing zone, may be necessary if the terrain or enemy situation does not permit landing on, or immediately adjacent to, the objective. When this is done, it is necessary to assemble the force and move to an attack position prior to assaulting the objective.

Alternate landing zones are always selected. Available approaches to the

landing zone, obstacles on the landing zone, and the weather forecast for the time of the operation must be considered. A combination of terrain and low ceiling or changing visibility conditions may preclude or temporarily deny the use of some landing zones, as would unexpected enemy action.

Generally, selected landing zones should be within range of supporting artillery. Supporting fires—air and ground—must be able to prevent effective enemy operations against an air assault force until a strong foothold is gained in the objective area.

TACTICAL DECEPTION. In order to achieve surprise and to increase aircraft survivability, a deception plan should be developed. Multiple flight routes, false insertions, indirect routes of approach, and false preparations are a few examples of good deception techniques.

AIR ASSAULT OPERATIONS

General

Air assault combat operations that may be conducted by the air assault division are described in this section. Although the division possesses neither the degree of firepower nor the staying ability of armored and mechanized divisions, it is unique in its organization, capabilities, and employment. The division is particularly well suited for the restrictive terrain of mountains, urban areas, jungles, and the arctic. Whether

engaged in offensive or defensive operations, the dominant characteristic of the air assault division is the air assault capability provided by its helicopters.

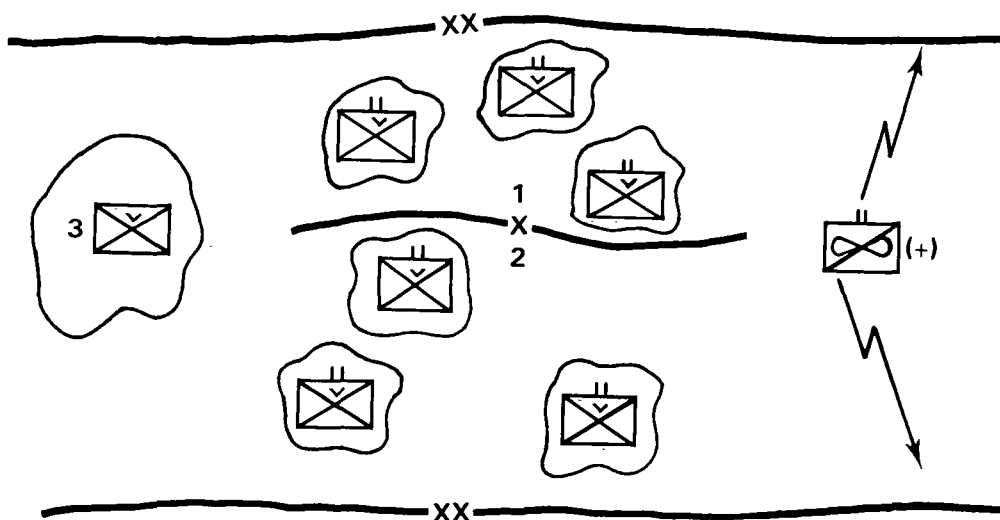
The air assault division normally is assigned to a corps. It operates from a position where its mobility permits its use in a variety of missions throughout the corps area.

Offensive Operations

MOVEMENT to CONTACT. The air assault division can conduct a movement to contact either independently or as part of a larger force. During independent operations the covering force is normally the air cavalry squadron reinforced with attack helicopters and artillery. Attack helicopters are most often employed where they can fire forward of ground systems. The squadron reconnoiters to locate the enemy, while air assault battalions remain in assembly areas

under control of the brigade headquarters. When contact is made, the squadron or attack battalion develops the situation to determine the enemy's strength and dispositions. The movement to contact ends when the brigades attack. When participating in a movement to contact as part of a larger force, the division is well suited to conduct **covering force**, **flank guard**, or **rear guard** operations.

AIR ASSAULT DIVISION MOVEMENT TO CONTACT AS AN INDEPENDENT FORCE



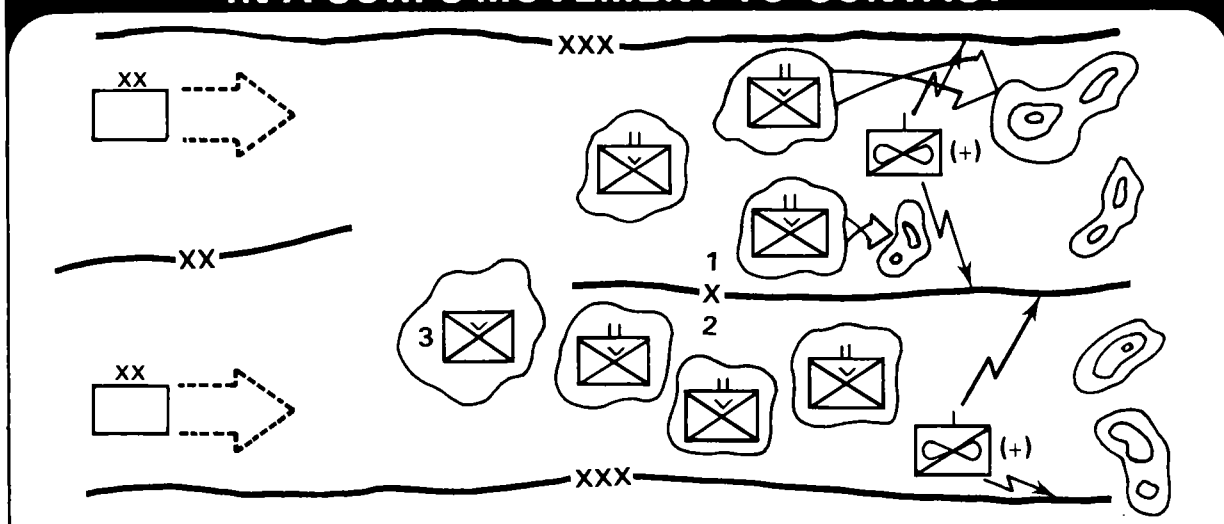
Covering force. The air cavalry squadron of the air assault division can overfly rough terrain, find the enemy, and develop the situation. Brigades are deployed as necessary to insure the uninterrupted movement of the main body. Two methods may be used by the division to conduct the corps covering force mission:

- Reinforced air cavalry elements under division control reconnoiter while air assault battalions remain in brigade assembly areas or displace to forward

assembly areas in order to be readily available for commitment. When contact is made with the enemy, and after the air cavalry has developed the situation, air assault battalions are committed to destroy the enemy. This is the normal method of employment.

- Brigades, with air cavalry elements under their operational control, conduct covering force operations as the division minus moves by bounds behind the leading brigades.

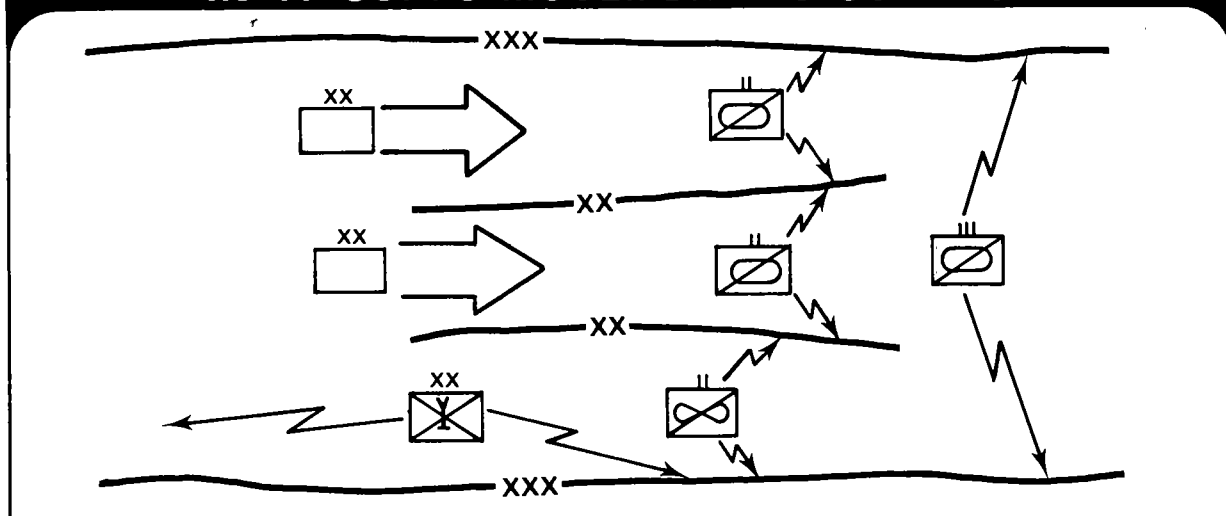
AIR ASSAULT DIVISION AS COVERING FORCE IN A CORPS MOVEMENT TO CONTACT



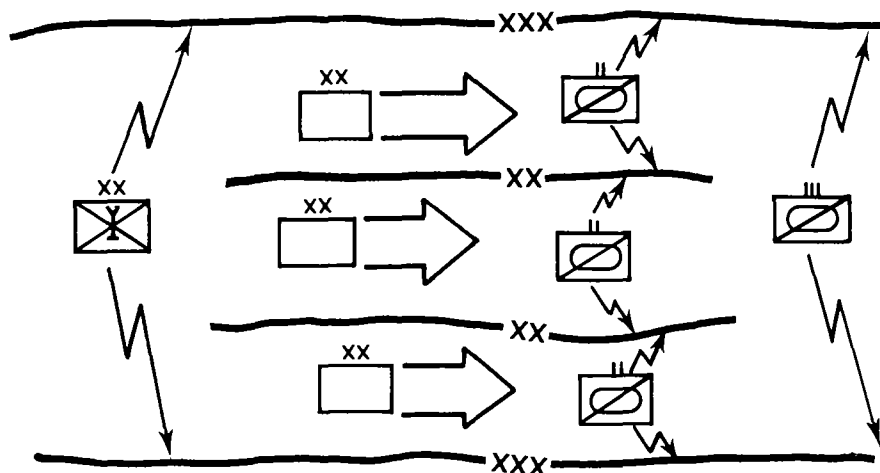
Flank and rear guard. The air assault division can perform flank or rear guard missions for the corps and protect the main body from ground observation, direct fire, and surprise attack. As a guard force, it has sufficient combat power to defeat enemy reconnaissance forces and to delay an enemy attack until the main body can

deploy. The rear guard follows the main body, occupying successive positions. The rear guard also screens between flank positions and rear elements of the main body. The division conducts rear guard operations by moving from position to position controlled by phase lines designated by the main body commander.

AIR ASSAULT DIVISION AS CORPS FLANK GUARD IN A CORPS MOVEMENT TO CONTACT



AIR ASSAULT DIVISION AS CORPS REAR GUARD IN A CORPS MOVEMENT TO CONTACT

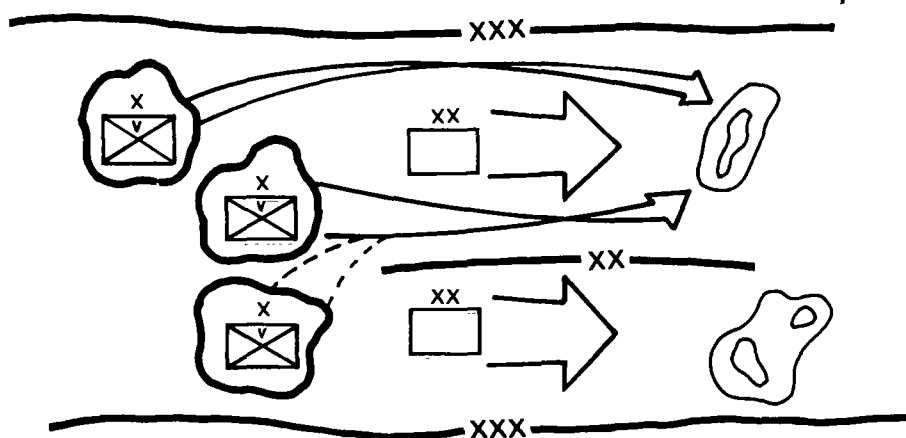


ATTACK. The division is capable of attacking enemy forces by rapid deployment and redeployment of forces using its air-mobility and firepower.

Hasty attack. The air assault division conducts the hasty attack by landing in the rear or on the flanks of the enemy and assaulting his positions either from a single

direction or from several directions simultaneously. The ability of the division to concentrate its combat power using multiple axes reduces exposure time and increases survivability. Field artillery and close air support are used to suppress enemy air defense. The attack helicopter battalion is maneuvered to fight as required. Counterair air defense artillery operations

AIR ASSAULT DIVISION CONDUCTING A HASTY ATTACK



are conducted to prevent enemy air operations from effectively interfering with the air assault operation.

The great strength of the air assault division is its ability to rapidly concentrate combat power. Once a hasty attack is started, momentum is maintained by additional air assault operations to reinforce committed units or to redeploy units to other critical points.

Deliberate attack. The air assault division is not suitably organized or equipped to conduct a deliberate attack against an enemy armored or mechanized force. In a corps deliberate attack, the air assault division could conduct economy of force operations, freeing other divisions to attack. Additionally, the division could be used to seize key terrain for subsequent linkup operations.

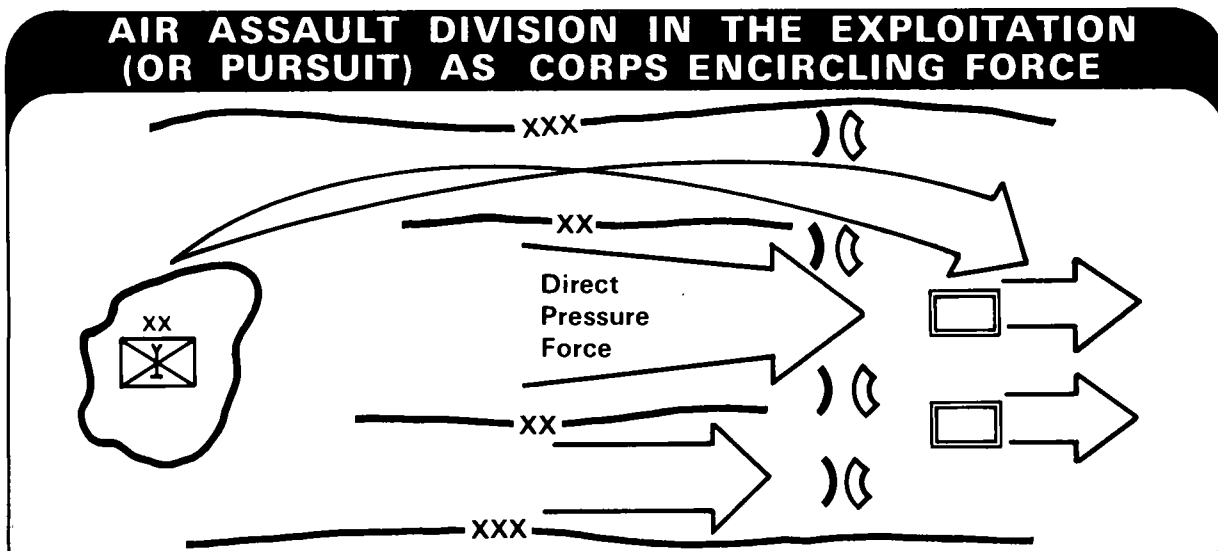
Exploitation. The division is well suited to participate in the exploitation, either independently or as part of a larger force,

rapidly bypassing resistance to strike deep into the enemy rear and disrupt his defense.

As the division or corps commander determines that the enemy defense is disintegrating, he searches for objectives in the enemy rear which will facilitate the destruction of the enemy defense. Command and control facilities, logistic centers, and combat support units are ideal objectives for attack by the air assault division. Once suitable objectives are identified, air assault operations are initiated. The committed force will vary in size from the assault elements of a brigade to the entire division, depending on the size of the area to be secured and the nature of enemy forces to be engaged.

If enemy air defense is such that air assault operations in his rear area will present an unacceptable risk, the division can be used in a follow and support role. This frees armored and mechanized units to conduct the exploitation.

Pursuit. The air assault division is well suited to conduct a pursuit. In the pursuit, the division may be used as the direct



pressure force, the encircling force, or as the follow and support force. However, the division is best used as the encircling force. Air Force tactical fighter bombers, attack helicopters, and air assault forces can repeatedly attack flanks of the withdrawing enemy columns, slowing them, and aiding in their destruction. Blocking positions can

be established on withdrawal routes to trap enemy forces between the encircling force and the direct pressure force.

Field artillery and forward arming and refueling points (FARPs) should be lifted into encircling force areas as soon as possible.

Defensive Operations

—Against an Infantry-Heavy Threat—

The air assault division defends against an infantry-heavy Threat by employing its airmobility to achieve a maneuver advantage over the enemy. This advantage makes it capable of performing operations in the covering force area, main battle area, and rear area.

COVERING FORCE AREA (CFA). The air assault division can conduct covering force operations for a larger force, or it can provide its own covering force forward of its assigned main battle area (MBA) sector.

Normally, the covering force consists of air cavalry, infantry, artillery, engineer, attack helicopter, and combat support helicopter units. Infantry and artillery assigned to the covering force must be provided with enough helicopters to move the entire unit. The covering force is generally organized based on the:

- Number of enemy avenues of approach into the CFA.
- Size and type of enemy forces.

When the division provides a covering force forward of its own sector, it is controlled by:

- Attaching units employed in the CFA to the air cavalry squadron.

- Employing a brigade headquarters.

- Establishing a provisional headquarters under an assistant division commander.

The method used is based on the:

- Number of units assigned to the covering force.
- Personnel and equipment available to establish a provisional headquarters.

The covering force accomplishes its mission by placing the majority of its combat units on the most dangerous avenues of approach into the covering force area. Air cavalry deploys to the front and provides early warning of the direction, speed, and composition of enemy forces. Enemy units are taken under fire as soon as they are within range of weapons. As the enemy attempts to close with ground units of the covering force, the air cavalry, attack helicopters, artillery, and close air support provide firepower to enable ground units to displace by air to successive positions. Covering force units destroy enemy units, deceive the enemy as to the location of the MBA, slow his speed of movement, and cause him to mass and divulge his intentions. Units are assigned missions in the MBA when the covering force mission has been completed.

MAIN BATTLE AREA. The mobility advantage which the air assault division has over enemy infantry-heavy units allows it to defend in MBA sectors substantially larger than those assigned the infantry division. The division defends by orienting on the destruction of advancing enemy forces and fights a series of battles in depth, attacking the enemy from the front, flanks, and rear while using minimal forces to maintain surveillance over the remainder of the assigned sector.

Battle positions are selected and prepared throughout the MBA along likely avenues of approach. Primary and alternate landing and pickup zones are selected for each battle position. When enemy fires preclude extraction of the air assault battalions from battle positions, covered and concealed routes are selected for foot movement to alternate pickup zones.

Only when absolutely necessary should the division direct subordinate echelons to occupy or retain terrain. If there is a situation in which the retention of terrain is essential to the defense of the entire sector, its retention should be specified.

The division performs the reserve and rear area security missions against an infantry-heavy force in the same manner as against an armor-heavy force.

DELAY and WITHDRAWAL. The air assault division is well suited to delay, cover, or screen the withdrawal of a larger force. It can protect the flank of the larger force or conduct spoiling attacks against the advancing enemy.

Success of air assault division delay and withdrawal operations depends on the ability of the division to move ground forces by air. The division must retain the ability

to deploy and pick up air assault infantry battalions.

Delay. The air assault division delays by establishing contact with the enemy and conducting offensive operations that disrupt and disorganize his attacking formations. Air assault forces delay by positioning forces to the front and flanks of the advancing enemy. Battalions are moved by air to battle positions adjacent to the enemy's route of advance to force the enemy to divert combat power and reduce his rate of advance, and to cause attrition of the enemy force.

The division occupies successive or alternate positions. When delaying on successive positions, dedicated helicopter support is provided to brigades.

Withdrawal. Secrecy and timing are critical to the success of a withdrawal. Once movement by air has begun and secrecy is lost, the withdrawal must be completed as rapidly as possible to deny the enemy an opportunity to react.

Withdrawals are supported by all available fires, with priority of fires shifting from unit to unit as they withdraw. Field artillery fires are used to suppress enemy field and air defense artillery. Close air support and attack helicopters can be used as a covering force to assist in the disengagement of ground forces.

Priority fires are planned with smoke and improved conventional munitions (ICMs) to support pickup of units. Close air support and attack helicopters are used to blunt enemy attacks or relieve enemy pressure. Air cavalry disrupts enemy attacks by engaging the enemy from the front and flanks and interdicting his movement. Electronic warfare operations are conducted against enemy fire control communication links.

If at all possible, pickup of ground units takes place under conditions of reduced visibility. If enough lift helicopters are available, the entire force is picked up simultaneously. When the force cannot be

withdrawn in a single lift, the main body of the ground force is withdrawn under cover provided by security elements. Security elements are then withdrawn in one lift.

Defensive Operations

— Against an Armor-Heavy Threat —

The air assault division is not well suited to perform a defensive operation against mounted forces on terrain favorable to mounted operations. However, the division can effectively operate in the restrictive terrain of built-up areas or mountains.

The air assault division can conduct the following operations on the armored and mechanized battlefield in support of larger unit defensive operations:

- Main battle area operations in restrictive terrain.
- Economy of force or reserve.
- Rear area operations.
- Flank security operations.
- Limited-objective counterattack operations or raids.
- Delay and withdrawal operations.
- Seizure of cross FEBA objectives for linkup operations.

COVERING FORCE AREA. The attack helicopter battalion and the air cavalry squadron of the air assault division are well suited for employment in covering force operations when employed with armored

and mechanized units. The remainder of the division is not suited for covering force operations.

MAIN BATTLE AREA. The division is not well suited to defend against armored and mechanized forces. If it is used to defend against such forces, it should be employed in restrictive terrain not favorable to employment of armor formations. The division can be well employed in built-up areas, rough mountainous terrain, and heavily forested areas. Elements of the division can be employed as a reserve, for example, the attack helicopter battalion.

ECONOMY OF FORCE. The division defends in an economy of force role by deploying units in depth on the avenues of approach through the sector. The air cavalry squadron screens areas where enemy attack is possible but unlikely. The division defends by repositioning combat units to counter the major enemy thrust. After engaging the enemy, and prior to the enemy's closing on battle positions, units are picked up from predesignated PZs and organized in depth. The division essentially conducts a delay. Field artillery is repositioned by air and massed as required. This procedure is repeated as necessary to halt the enemy advance. Dedicated aviation units support brigades. Initially, the attack helicopter battalion is employed under division control. Once the main attack

develops, the attack helicopter battalion, or some of its companies, may be placed under the operational control of the forward brigades. Reserve battalions of the division are rapidly transported to threatened areas by helicopter.

RESERVE. The air assault division can be used as a reserve for a corps or larger force. Normally, the reserve will be organized with combinations of the following units:

- Air assault battalions.
- Attack helicopter battalion.
- Air cavalry squadron.
- Field artillery battalions.
- Aviation group battalions.

REAR AREA. The air assault division conducts rear area combat operations in coordination with the rear area operations center (RAOC) of the corps support command (COSCOM). The division will seldom be assigned to the COSCOM, but because of its location in the corps rear area, it may be assigned a rear area security mission. The air assault division assists in the security of the corps rear area by:

- Conducting surveillance of assigned areas of the corps rear area.
- Providing forces to counter enemy airborne, airmobile, or guerrilla operations.
- Defending threatened fixed installations.

The division conducts rear area combat operations by locating forces in dispersed assembly areas throughout the corps rear

area, conducting aerial surveillance of designated areas, and deploying forces on order. Possible enemy landing sites are reconnoitered, and likely enemy objectives are identified. From the resulting analysis, plans are developed and coordinated to counter possible attacks in the corps rear area.

FLANK SECURITY. The division can screen the flank of a corps or larger force conducting a defense. Flank security for divisions employed in the main battle area normally is provided by the divisional armored cavalry squadrons. However, when the mission exceeds the capability of these squadrons, the air assault division may be employed. The air cavalry squadron, reinforced with attack helicopters and field artillery, normally will be the force used in flank screening missions.

The squadron gains and maintains contact with the enemy, reporting information about his size, disposition, location, and movement speed. The division selects positions between the enemy force and the flank of the corps, and employs brigades to delay and destroy the enemy force within its capability. When possible, brigades deploy on terrain that restricts movement of armored vehicles. This allows the air assault battalions to be employed in depth along avenues of approach through the area.

LIMITED-OBJECTIVE OPERATIONS. The division can conduct limited-objective attacks against enemy facilities and lines of communication. For example, it can be used to seize key terrain, bridges, and mountain passes to facilitate offensive operations.

RAIDS. Airmobile raids are conducted to accomplish a specific mission with no intent of holding the area. They can be conducted to:

- Harass, deceive, or disrupt the enemy and preclude his concentration of forces in another area.

- Obtain information of enemy installations, units, or activities.

- Disrupt enemy command and control.

- Capture personnel or materiel.

Raids are characterized by rapid movement to gain surprise and by rapid withdrawal to avoid decisive engagement. Examples of raid objectives are:

- Command posts.

- Communications centers.

- Airfields and their facilities.

- Key enemy personnel.

- Supply installations.

- Conventional, nuclear, and chemical weapons delivery means and storage areas.

- Prisoner of war compounds.

- Targets of intelligence interest.

The steps in planning and preparing for a raid closely parallel those required for an air assault; however, time is normally available for rehearsals and detailed planning.

DELAY and WITHDRAWAL. During the conduct of delay and withdrawal operations, the air assault division will use an aggressive combination of rapid battlefield movements combined with offensive maneuvers against the enemy force.

Delay. The air assault division delays with forces weighted with armor-defeating weapon systems. In order to reduce lift requirements and speed movement from preselected PZs, nonessential infantry forces are moved into assembly areas and lift units are prepositioned. Offensive operations are conducted to disrupt and disorganize enemy formations, forcing the enemy to switch from his approach march formation to a hasty attack formation. The delivery of accurate and heavy antitank fires may force the enemy to deploy for a deliberate attack. There are two ways to delay: on successive positions or on alternate positions.

- Successive positions. This requires terrain that provides concealed helicopter egress routes from position to position. Armor-defeating systems are echeloned to provide continuous covering fires for one another during displacement.

- Alternate positions. Using this type of delay, the time available to relocate is increased, and the control of helicopter units will be more centralized. When possible, alternate positions on the flanks of the attacking force are selected.

Withdrawal. An air assault division withdrawing under enemy pressure normally will use close air support, attack helicopters, and field artillery to assist in disengaging.

Elements (task-organized with armor-defeating weapon systems) will cover the withdrawal of air assault infantry.

Priority of supporting fires shifts from unit to unit as forces redeploy to new positions. Field artillery, close air support, and mortars are used to attack enemy field artillery, air defense units, and advancing maneuver units using a mix of smoke and improved conventional munitions (ICMs).

When withdrawing without enemy pressure, air assault battalions are ex-

tracted first, followed by armor-defeating weapons.

CROSS FEBA OPERATIONS. The air assault division is ideally suited to conduct attacks to seize objectives across the FEBA as a means of transition to the offense and subsequent linkup.

— Fire Support During Air Assault Operations —

Fire support in the air assault division differs slightly from that in the armored or mechanized divisions. Because of the reduced amount of field artillery organic to air assault units, close air support, naval gunfire, or additional field artillery may be necessary. If landing zones and operational areas are beyond the range of indirect fire weapons located behind friendly lines, air assault artillery may be positioned to support maneuver forces. Mortars that move with the assault force assume increased importance because they are usually the first organic indirect fire support means available to the commander.

Fire planning for air assault operations is initiated on receipt of the mission and continues concurrently with the maneuver planning sequence. Supporting fires are planned and coordinated so that fire support is provided throughout the operation. Offensive and defensive fires are planned to support the force as it maneuvers in accordance with the ground tactical plan.

The air assault force is most vulnerable during landing and assembly. Preparatory fires in support of the landing may be

scheduled or on call. Both types of fires must be planned and timed in such a manner that continuous coverage of the landing zone and its approaches is provided throughout the assault.

Air defense suppressive fires are planned against known or suspected targets along the flight route in support of the air movement and staging plans.

Defensive fires may be required around pickup zones to support loading operations. High-angle fire on enemy positions may be used to allow armed aircraft to conduct their missions while flying under field artillery fires.

Fires to support an assault may be planned, in many instances, on the basis of suspected target locations rather than known target locations. All intelligence-gathering agencies should be exploited in order to acquire the best target information possible.

Firing batteries can be rapidly shifted about the air assault battlefield to insure fire support to maneuver units.

COMBAT SERVICE SUPPORT

General

Unique aspects of combat service support in the air assault division are:

- The requirement to employ forward area refueling equipment (FARE) and (FARPs) forward of the brigade trains. Such employment increases aircraft station time in the target area.

- Utilization of the assault support

helicopter battalion CH-47s to resupply forward of the brigade trains.

- The requirement to transport, store, and issue large quantities of JP-4.

- Heavy requirements for class IXA.

- Transportation capability in the division supply and service battalion is less than that found in other types of divisions.

Supply and Maintenance

In the event of a contingency or an airhead operation, all division elements deploy to the area of operations with prescribed amounts of all classes of accompanying supplies. During initial phases of deployment, these supplies are the only source of resupply. A source of emergency resupply is normally available but will likely be limited to classes I, III, and V.

Accompanying supplies are further divided into unit, forced, and reserve accompanying supplies. Unit supplies include the basic load of ammunition and prescribed loads of other classes of supply. They are packaged and loaded by the unit, carried by individual soldiers, or prepared for airdrop. Loading, issue, and control of these supplies are the receiving unit's responsibility.

Forced supplies are bulk supplies of all classes which provide a backup for unit supplies during the early stages of the operation. Issue is the responsibility of the S4 of the deploying force. Some supplies of all classes are kept in reserve for the division.

Follow-up is either automatic or on-call and is based on the G4's estimate of the

daily expenditure of all classes of supply for each unit. Since organic ground transportation is extremely limited, supplies should be "throughput" by supporting corps elements to the lowest possible level.

Requests for follow-up supplies are initiated by the battalion S4 and are forwarded through the FASCO to the division support command (DISCOM). Approved requests are then forwarded by the most expeditious means to the rear echelon where the G4 establishes a priority for delivery. Requests are either routine or emergency. Routine requests require delivery in 24 to 72 hours, while emergency requests require delivery in less than 24 hours. The movement control center (MCC) coordinates movement utilizing either internal support (helicopter, trucks) or external support (Air Force or corps transportation). Automatic follow-up supply is based on consumption estimates and may not contain the exact quantities required by deployed forces. Use of automatic follow-up supply for an extended period can create excesses or shortages in different supply categories.

Routine supply should be initiated as soon as possible. The DISCOM commander

directs the conversion to routine supply and bases his decision on the tactical situation and logistical status of the division. When routine supply is initiated, units requisition supplies using normal supply procedures.

Each brigade, when committed, and its attached and supporting units will be supported by the following units located in or near the brigade trains area or split between the trains area and the airhead operation:

A forward area support coordinator (FASCO).

A forward service support element consisting of:

- A medical company which provides:

Ground and aeromedical evacuation.

Patient treatment and evaluation.

Forward distribution point for Class VIII supplies.

Maintenance support for medical-peculiar equipment.

- A forward supply and service company which provides:

Forward distribution points for Classes I and III.

One or more water points.

One or more bath points (when augmented).

A clothing exchange point (when augmented).

A graves registration collection point (when augmented).

- A forward maintenance company with attached missile maintenance sections which provide:

Direct support maintenance for ground missile equipment within the task force.

Class IX forward distribution point for ground and missile equipment.

Forward maintenance and salvage collection points.

Evacuation of ground and missile equipment requiring GS maintenance.

- A forward aircraft maintenance detachment from the division's transportation aircraft maintenance battalion which can provide direct support maintenance during separate brigade operations or when otherwise necessary.

Under normal circumstances, combat service support (CSS) elements provide combat service support on an area basis. Command control is with the parent battalion or command. Operations are coordinated by the FASCO. In the event of separate brigade or battalion operations, CSS elements operate under the command of the FASCO. The FASCO and a light forward service support element (FSSE) normally deploy on an airhead operation. When the parent organization of the CSS element arrives, command control reverts to the parent battalion or command.

The forward support company of the direct support (DS) maintenance battalion (ground) provides DS maintenance for all ground equipment and serves as a base of supply for ground equipment repair parts and common hardware-type items. The transportation aircraft maintenance bat-

talion (DS) provides direct support maintenance to all divisional units that do not have aviation unit maintenance (AVUM); additionally, it has the capability to provide backup DS maintenance to all units with AVUM, and it serves as a base of supply for aviation-related repair parts. Salvage collection points are established by the ground maintenance battalion normally

within or close to the main division maintenance collection point.

Since replacements in certain low-density aircraft maintenance MOSs are not always readily available, the division should requisition personnel in time to allow their integration into units before operations begin.

— Transportation —

Due to significant differences in the equipment available, the extended operating distances, the rapidly changing tactical situations, and the isolated nature of air assault operations, transportation for CSS operations must be centrally controlled in the air assault division. The air assault division's primary CSS transportation means is its helicopters which are provided by the division's aviation group and, for CSS operations sorties, are controlled by the DISCOM movement control center (MCC). One platoon of light cargo trucks from the DISCOM supply and service (S&S) battalion is also available.

The basic functions of planning and coordinating transportation support of CSS operations are the same as those described in chapter 6. Requests for movement are processed through logistic channels from the unit S4 through the FASCO to the MCC in the same manner as in the infantry division. DISCOM staff transportation personnel are located in the command section and the security, plans-operations section of headquarters and headquarters company.

Personnel from these sections are organized to form the DISCOM movement office. In each of the brigade support areas, the movement element is located with the FASCO. The DISCOM movement control center controls division transportation used for combat service support. The DISCOM movement office coordinates with the division materiel management center (DMMC) or main S&S company and the division Adjutant General concerning arrival of resupply and replacements in the division support area or the brigade support area. Shipments may arrive by motor or air transport. Any requirement to support the division which exceeds the transportation capabilities (air and motor transport) allocated to the DISCOM for combat service support is reported to the division transportation officer (DTO), who is a special staff officer working for the G4. The DTO requests additional support from the corps through movement control channels in the same manner as in other divisions.

Preplanned tactical airlift support is requested as described in chapter 6.

APPENDIX A

REFERENCES

FM 5-100	<i>Engineer Combat Operations</i>
FM 6-20	<i>Fire Support in Combined Arms Operations</i>
FM 6-20-2	<i>Division Artillery, Field Artillery Brigade, and Field Artillery Section (Corps)*</i>
FM 7-20	<i>The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger)</i>

FM 7-30	<i>Infantry, Airborne, and Air Assault Brigade Operations*</i>
FM 10-63	<i>Handling of Deceased Personnel in Theaters of Operation</i>
FM 11-50	<i>Combat Communications within the Division</i>
FM 17-50	<i>Attack Helicopter Operations</i>

FM 17-95	<i>Cavalry</i>
FM 30-5	<i>Combat Intelligence</i>
FM 44-1	<i>US Army Air Defense Artillery Employment</i>
FM 44-3	<i>Air Defense Artillery Employment, Chaparral/Vulcan</i>

FM 54-2	<i>The Division Support Command and Separate Brigade Support Battalion</i>
FM 57-1/AFM 2-51	<i>US Army/US Air Force Doctrine for Airborne Operations</i>
FM 71-2	<i>The Tank and Mechanized Infantry Battalion Task Force</i>
FM 71-3	<i>Armored and Mechanized Brigade Operations*</i>

*To be published

FM 71-100	<i>Armored and Mechanized Division Operations</i>
FM 90-2	<i>Tactical Deception</i>
FM 90-3	<i>Desert Operations</i>
FM 90-4	<i>Airmobile Operations*</i>
FM 90-5	<i>Jungle Operations*</i>
FM 90-6	<i>Mountain Operations*</i>
FM 90-7	<i>Obstacles*</i>
FM 90-10	<i>Military Operations on Urbanized Terrain</i>
FM 90-11	<i>Operations in Cold Weather*</i>
FM 90-13	<i>River Crossing Operations</i>
FM 90-14	<i>Rear Area Combat Operations*</i>
FM 100-5	<i>Operations</i>
FM 100-10	<i>Combat Service Support</i>
FM 100-15	<i>Corps Operations*</i>
FM 100-26	<i>The Army Air-Ground Operations System*</i>
FM 101-5	<i>Staff Organization and Operation*</i>
FM 101-5-1	<i>Operational Terms and Graphics*</i>
FM 101-10-1	<i>Staff Officers' Field Manual—Organizational, Technical, and Logistic Data</i>
TC 100-33	<i>Division Electronic Warfare Operations</i>

* To be published

APPENDIX B

IMPLEMENTED AND RELEVANT INTERNATIONAL STANDARDIZATION AGREEMENTS

International Standardization Agreements Implemented by FM 71-101

NATO STANAG	CENTO STANAG	ABCA QSTAG	TITLE
2082	2082	—	<i>Relief of Combat Troops</i>
2868	—	—	<i>Land Force Tactical Doctrine (ATP-35)</i>

International Standardization Agreements Relevant to FM 71-101

NATO STANAG	CENTO STANAG	ABCA QSTAG	TITLE
2014	2014	506	<i>Operation Orders, Annexes to Operations Orders, Administrative and Logistics Orders</i>
2017	2017	508	<i>Orders to the Demolition Guard Commander and Demolition Firing Party Commander</i>
2019	2019	509	<i>Military Symbols</i>
2034	2034	516	<i>Ammunition Supply Procedure</i>
2036	2036	518	<i>Land Minefield Laying, Recording, Reporting and Marking Procedures</i>

NATO STANAG	CENTO STANAG	ABCA QSTAG	TITLE
2070	2070	—	<i>Emergency War Burial Procedures</i>
2088	2088	182	<i>Battlefield Illumination</i>
2099	2099	—	<i>Fire Coordination in Support of Land Forces</i>
2101	2101	—	<i>Principles and Procedures for Establishing Liaison</i>
2109	—	181	<i>Postal Organization for the NATO Armed Forces in Wartime</i>
2129	2129	—	<i>Recognition and Identification of Forces on the Battlefield</i>
2135	—	—	<i>Procedures for Requesting and Providing Logistics Assistance</i>
2259	—	178	<i>Terrain</i>
2355	—	—	<i>Procedures for the Employment of Helicopters in the Anti-Armor Role in Support of Ground Forces</i>
2861	—	—	<i>Procedures for the Recovery of Ground Aircraft</i>
2889	—	—	<i>Marking of Hazardous Areas and Routes Through Them</i>
2904	—	—	<i>Air-Mobile Operations (ATP-41)</i>
3700	—	—	<i>NATO Tactical Air Doctrine (ATP-33)</i>
3736	—	—	<i>Offensive Air Support Operations (ATP-27)</i>

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